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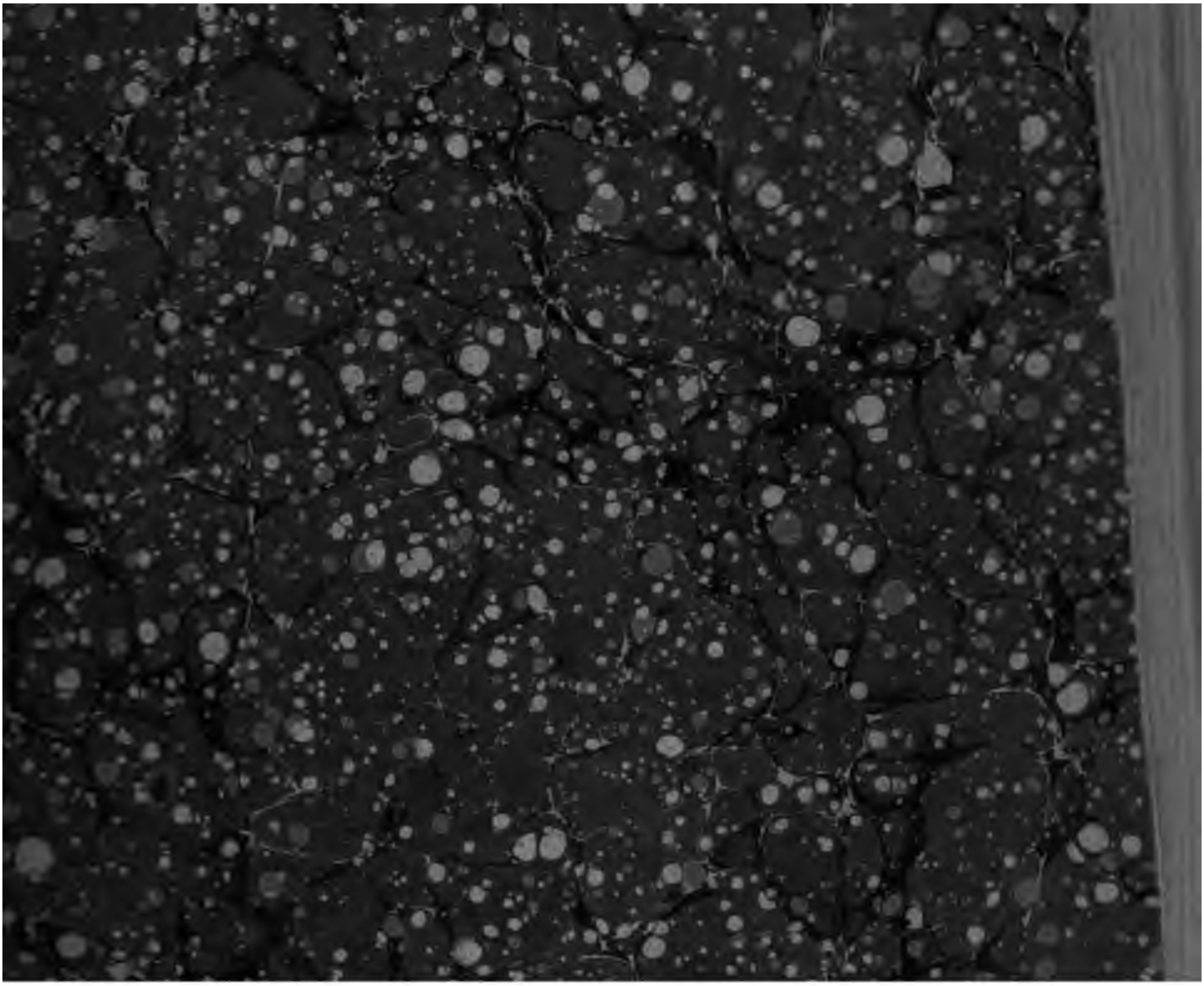

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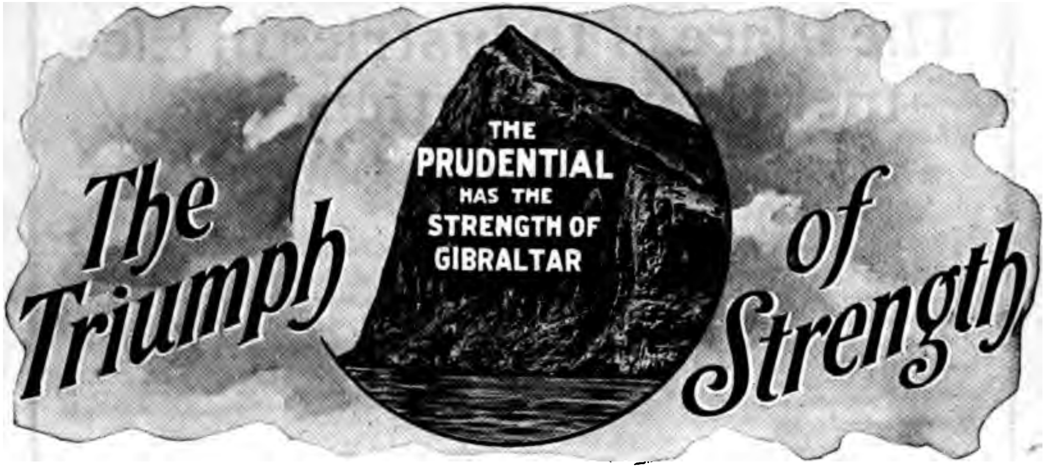
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VOLUME V NUMBER I

THE ELEMENTARY SCHOOL TEACHER

SEPTEMBER, 1904

DEDICATION OF THE SCHOOL OF EDUCATION.[1]

NICHOLAS M. BUTLER,
PRESIDENT OF COLUMBIA UNIVERSITY, NEW YORK, N. Y.

THE building of a great university is one of the noblest tasks ever committed to the hand of man. To watch its roots strike ever deeper into the nourishing soil of favoring public opinion, and to watch its results spreading over an ever widening area, is an inspiration; but to participate in the building of such a university gives a supreme satisfaction, perhaps appreciated only by those who have personally felt it.

In the Middle Age it was the great cathedral which most fully embodied and symbolized the ideals and the aspirations of civilized man. All over Europe they were rising for centuries, those great, solemn, stately piles, whose pointed windows and arches and towering spires marked the aspirations of man for the things of heaven, and stood almost as if they might draw down from the unseen depths beyond the clouds something of the divine inspiration that lingered there. Into the building of those great cathedrals were poured the wealth of prince and potentate, and the labor of pauper and of peasant. They were the embodiment of the faith of a Christian people for centuries, and, representing as they did the dominating ideals of that faith, they pictured out in permanent and material form the aspirations of those people.

In our own time the university has succeeded to the place once held by the cathedral as the best embodiment of the uplifting forces of the modern time. We still find place for the cathedral, but we place by its side, as more distinctly our own and as more distinctly representative of everything that has entered into our modern life, the great university as it is found in every nation of the civilized world.

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[1] The oration delivered at the dedication of Emmons Blaine Hall, School of Education, University of Chicago, May 14, 1904.

When the history of the last century comes to be written, it will be seen that, after the fall of Napoleon and the rise of the democratic movement in Europe, the great impulse that was given to the founding and development of universities represented the very best thought and the best and highest ideals of the time. Those universities, striking root in a democracy, have become particularly popular institutions. They have put off one by one the marks of privilege and of exclusiveness, and under the sheltering care of the modern democratic state they have become the pride of a democratic people. There are gathered together those devoted bands of scholars, men and women who are giving their lives to the pursuit of truth in its every form, and who are bringing together for the service of mankind the results of their search in every slightest department of letters, of science, or of art.

From the very beginning the essential element in the university has been no plan of organization, no great scheme or provision of endowment, no magnificent pile of stately buildings; the essential thing has been the presence of the great, inspiring, devoted teacher, who could draw to himself those who hungered and thirsted to learn. So it was with those who gathered at the feet of the Arab physicians about the healing springs of Salerno; so it was when the students of civic law flocked to Bologna to learn from Alericus; so it was when the thousands of students crowded the hilltops that now are Paris to hearken to the eloquent dissertations of William de Champeaux and Abelard; so it was in the quieter cloisters on the banks of the Isis and the Thames. There is, and there can be, no university built out of stone. There is, and there can be, no university made of wealth. The university is a thing of the spirit, and that spirit will surely find in the gratitude of a democratic people the body it needs for its existence.

As the university developed and touched democratic life at ever more points, the old seven liberal arts began to break up;

not that they were too many, but that they were too few to keep pace with the new-found knowledges of man, and that older classification no longer sufficed to give us the material out of which culture and character could be had and made. One science pressed hard upon another, one language came on the train speedily of its predecessor; and before long not seven liberal arts, but seventy times seven, were included in the program of studies of the great universities.

Why was it, do you suppose, that it took the university so long to study itself? Why did century after century go past before it turned its eye inward and made its own process a subject of analysis, of investigation? I do not know, unless it be that introspection of a scholarly and analytic kind comes late in the history of human activities. It is true of man himself that he was first absorbed in the study of the external world. He was oppressed by it, overcome with it, stupefied at it. He peopled it with gods and demons because the forces were impossible for him to understand: and really it was only when Socrates came that the eye of man was turned in, and man's own mental processes, his own power of knowledge, his own intellectual conquests, were themselves studied and related to this vast content that lay without. Whatever reason there may be for introspection coming late in the history of the race, there is, I suppose, substantially the same reason for introspection coming late in the history of universities. It took a long time to turn the university eye in upon its own process. And when it first turned the eye in, as it began to do in the eighteenth century, under the guidance of professors of philosophy in Germany, it was absorbed in theoretical discussions peculiar to the stage of advancement in which the pupil found himself when he came within university quarters.

It took a still longer time for the university to grasp the fundamental truth, now so simple and so axiomatic, that the educational process is one, and that no human power can break it into parts. You may deal with it in part, you may cut it up for theoretical purposes into divisions, but no man can draw the point or line at which the division takes place. We have agreed upon certain classifications for purposes of practical administration, and it is well that we should. That is convenient, it is helpful. But the moment we attach any great metaphysical reality to those elements of classification, we have departed from the one fundamental truth in all human life and human nature, viz., that growth and development are continuous and unending.

Finally, under the guidance of the psychologists this time, not the philosophers as at first, the university came to see that this entire process was one, and that the system of education from birth to adulthood was as important for the university as any other subject that it had taken for its own. Then it left off sneering at the kindergarten and the elementary school, and it embraced them in its program as elements of human life to be studied and dealt with in the light of their fundamental and far-reaching importance.

We have been slow, no doubt, to see all this. We have been slow to be catholic about education. We have been slow to be scientific. But thanks be, in these great universities of America the fight for catholicity and the fight for scientific study of education has been won. There is no self-respecting university in this land today that would attempt to repeat the statements about education as a process and an art and a philosophy that were common twenty-five years ago; and it is a matter of supreme significance, it is a matter of the supremest significance, that we are met today formally to dedicate these magnificent buildings that are to stand, let us hope, so long as stone will endure, as a monument to the catholic educational ideals of the University of Chicago and as a monument to the far-sighted benefaction of those who have made them possible.

Now, what is it that we are to do? We are to do more, members of the University, than merely to train teachers. The training of teachers is of supreme importance, to be sure; no one would dream of denying that. But beyond training teachers we are to study education itself. We are to remember that we are in the presence, not of something new, but of something almost eternally old that we have neglected to study and observe. Away down for twenty-five hundred years there have been the voices of seers and philosophers crying in the wilderness, urging mankind to take some interest in this great human institution. But only now, only in our own time, are we ready in our universities — ready philosophically, ready psychologically, ready perhaps physiologically — to take up the serious and determined study of an educational process itself. And then we are going to find how closely these bind our universities together by a study which relates itself with almost, if not quite, everything else they do.

In my judgment, we are going consistently to approach education on these converging lines. We are going to approach it along the line of physiological inquiry, along the line of psychological inquiry, and along the line of social or sociological inquiry. We are going to make ourselves familiar with the laws governing the growth and development of the human body. We are going to know the relation, more intimately than we do now, between the physiological and the earlier and slighter pathological states. We are going to lay continued emphasis upon the physical basis of education. And we are going to emphasize year by year health as the corner-stone of the educational structure.

We are going to approach education along the psychological line, and there we find much already done for us in certain fields. The science of psychology has proceeded by leaps and bounds since Fechner's time. Immense masses of material are at our disposal regarding the adult man, but we are still strangely unfamiliar with the growing mind and with some of the comparative mental stages which must enter into our comprehension of the educational process. We are going to deal more and more in the university with the study of the genetic and comparative aspects of psychology. We are going to ask how it is that these powers of ours take their rise, what contributes to their first manifestations, how do those manifestations alter in quantity as they progress. Do they reach a maximum of perfection and then fall away, or are they able to maintain themselves upon a common level of ability? Then, in the light of that information, we are going to ask searching questions about the food that the growing mind should have, and when and how that food should be applied. You say much of this has been done. Yes, much has been done. The trouble with it is that it has not been brought together, it has not been correlated, it has not been tested; and we are still without, let me remind you, any such exposition of the scientific process of education as we have of chemistry or physics or zoölogy. We are without any such scientific exposition of the principles of education as we have of the scientific principles of the law. Not that the material does not exist; but we have been slow in mastering it, slow in organizing it, slower still in stating it in tones which carry conviction because they are consented to by those who have made the test under scientific auspices.

Then we are going to approach this great field of study along the sociological side. This is one of the fields now most actively cultivated. It was cut off for years by false philosophy, which regarded the individual as something complete in himself. We are now happily convinced of the truth of the philosophy that the individual can only complete himself as he completes himself in and through the social whole of which he is a part. We have been having that dinned into our ears by psychologists and sociologists until we have come to see its practical importance. We have seized hold of it, not only as a theoretical principle thoroughly to be believed in, but as a working principle of government and education and morals.

As we proceed along these three converging lines, we are then going to relate all this subject-matter to the content of education. We are going to see what the scientific test of today has to say to the experience of the ages as to the material of education. We are going to ask what it has, if anything, that we have been passing by; what it has, if anything, that we have been putting in that should not be there; what it has, if anything, upon which we have been laying too little or too much emphasis or importance. And out of all this, as the years go on, we are going to come to a reasonable doctrine in which we can believe because it has passed through the crucible of science, because it has been tested by philosophic principle, and given to us as something co-ordinated that we can take as a working hypothesis.

It is extraordinary how long we have waited for the settlement of some fundamental questions of principles, while the nations of the earth have been spending treasure lavishly in the pursuit of the ideal, the terms of which they have disputed; but there are some things which human instinct is very sure about, even when human reason lags behind.

I have searched in vain through the history of philosophy and the history of education for any educational theory put forward by a responsible authority, that was based either upon necessitarianism or pessimism. I have been unable to find any philosopher who, whatever his theoretical principles have been, has not, when he spoke of education, assumed freely an optimistic view of the world. Now, if we are believers, as I take it we are, in the fundamental principles of a philosophy of evolution — evolution spiritual as well as evolution material — then we are at bottom optimists. We do not believe, we cannot believe, that the world is perfect, or that the world in its present state is the best possible world; but that it is a good world progressing toward a better end is the fundamental assumption of every schoolhouse in the land.

No community would dream of wasting its treasure upon training for something that was to be continually worse. The very hopelessness of the outlook would paralyze our endeavors materially, intellectually, and morally.

And so it is with freedom. So it is with freedom — the rational use of liberty — the one great end of individual existence, the one great end of the existence of the state. We have been taught formulas, we have learned the sentences and the phrases from the philosophers of the eighteenth century; but do they really know what it is to be free — not only free from the thralldom of kings, tyrants, and despots, but free from the thralldom of low and petty ideals, from mean and selfish and narrow motives, from ungenerous attitudes toward our fellow-men?

The one great desire of every university is the search for truth — truth in every form and every phase, truth as revealed in the annals of Greece, Rome, and the Orient; truth as revealed in the physical world in all its phases; truth as revealed in human history, in the study of human nature. Why are we anxious for truth? What can truth do for us? Truth shall make us free. We are in search of truth because we are in search of freedom;

and we are in search of truth in educational theory and practice because we are in search of free men and women — really free, liberated from their thralldom, be it external or internal, and permitted to grow as God meant that human beings should grow.

Something over four years ago it was my fortune to be asked to a gathering in a little town on the shores of Massachusetts Bay. I went down into a company of a thousand people in the little old stone church at Quincy, and I listened to Frank Parker tell the story of the regeneration of the Quincy schools. Simply as a child, that great man stood out before the men and women who were once children at his feet, and told them, without a word of boasting, how twenty-five years before he had come to that town and tried to set them free. It was one of the most beautiful, one of the most precious, memories that anyone might have — to hear from the lips of a great spirit the simple recital of the beginnings of a great achievement for humanity.

Quincy is a little town with few schools, few teachers, a handful of pupils; but out from Quincy went a spirit which has worked to use every moment to regenerate the elementary schools of this country. Why? Because a great spirit, with his eye fixed on freedom and with a consuming zeal in his heart for freedom, set himself the task.

Here you knew and loved him well. Over in yonder school he served this community and his country for the most active years of his life. Tender as a child in dealing with children, he was firm as a rock of adamant when faced with a question of right or wrong in education. I have seen him storm and rage when confronted by the forces of ignorance and corruption who were trying to undo his work and to tear down his ideals, and to stand between those helpless children and freedom. I have seen him stand in their presence and draw them to a consciousness of themselves, and with that to a consciousness of what he meant, by the simplest, most artless, and most affecting teaching processes that I have ever seen.

That great spirit has gone to his eternal rest across the silent river, but it must be that that spirit is with us here today. He knows, and this University will always know, what it is that has happened that has given such significance to this event. He knows, and this University will always gladly remember, what part he played in the beginnings of these great things. And it is fitting, as we look hopefully toward the future, as we dedicate a great building which is to serve this nation long after those within the sound of my voice today are gone — it is fitting that we should remember that his spirit, like all spirit, cannot and does not die. He went through life doing the best he could to draw things as he saw them for "the God of things as they are." And now when the veil is rolled away and he himself sees things as they are, the companionship, the inspiration, and the beneficence of that great spirit are with this company and with this splendid School of Education we so gladly and so hopefully dedicate.

DEDICATION OF THE SCHOOL OF EDUCATION.[1]

MRS. EMMONS BLAINE,
CHICAGO, ILL.

WHEN the dedication of the buildings of the School of Education was planned and I was invited to make some utterance, I declined, deeming the honor thus tendered to me one for which I was hardly fitted.

It has occurred to me, however, that there is one word I should like to say about myself, on this occasion, which perhaps no one else could say. And thus it comes about that I thrust myself into the place where I am permitted to stand. This has its merit, however, in being more truly illustrative of my connection with the School than otherwise it would be.

What I should like to say is for the sake of clearness and correct understanding of fact, in the summing up of the schools that have been for the school that may be — that in the giving of these first buildings of the School of Education to their work of usefulness every stone may be in its own place and no other.

The term " founder of the school " has been used in my hearing as describing my connection with some phases of the School's history. I should like to correct that, if I might be permitted. I did not found it — I simply found it; and those who find this School ever in some measure belong to it.

The founders, I take it, were the men who set in motion the educational forces which here meet to flow in one mighty stream: Francis W. Parker, who saw the ideal, and out of his own soul set on foot the effort to realize it, with whatever means were at hand — his own unbounded faith in the end and his clear vision of it, though afar off, being his great reservoir of power whose depth was never reached; John Dewey, who, likewise seeking his ideal, started his stream of effort, which stream still winds on before us, so that we may happily not pass upon its entirety, but only predict its greatness; Henry H. Belfield, who for years has fought the fight for the practical training of youth, to the uplifting and strengthening of education in our whole city; and all the others whose initiating work is here represented.

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[1] Address delivered at the dedication of Emmons Blaine Hall, School of Education, University of Chicago, May 14, 1904.

Finder is the only claim that I can make to a status in this school. But by virtue of that — and to just the extent found — owner, possessor; and by necessity of that, worker — though among the workers who wrought to this result I was the least.

But on these claims I rest. I beg exemption from any status as donor, for I count it the least; and would not be ranked by the sous given, but by the wealth received.

Happily in this School one is not marked by figures — unless it has departed from the old way; and the dollars were the incidents, where they could be found but the accident, of the work.

Since the joy of creating it cannot be mine, I ask no better place than a Finder of this School, or rather of one of its forerunners, the old Normal School, which still exists, through its transmigrations of soul, in the School of Education.

To be a finder with satisfaction one must be first a seeker; and a little searching for relative values and proportions in this confused civilization of ours makes a good preparation for discovery.

And what was the thing one discovered in the scheme of the old Normal School? Was it a method of teaching? A system of instruction? Not to me, primarily. It was a scheme of life. It was the human picture — so confused about us, so distorted — beginning to take shape, beginning to find its proportions and values, beginning to resolve itself into harmony.

As an artist, in forecasting his work, sketches in his mind or on his canvas the anatomy of his thought, giving each element its true proportion, so we must do in our plan of education; else the picture of life we are trying to draw from each individual, like the painted one, would be a jumbled mass.

And as in the one case, this work must be done in the beginning, so, in the other, it is the foundation work that must be so laid; else the whole will be but a patchwork. And if important and recognized in every work we know, how much more important in that subtle, delicate, and vital work — the construction of a conception of life in the growing mind — is the settling of values and proportions?

And in this process the first step is the selection of the central theme, the decision as to the next in importance, and so on to the last detail of finish. But without the anatomy all loses worth; and the last detail ranks with the fundamental drawing.

It was this work — it always seemed to me reconstructive indeed — that Colonel Parker had so well under way. He had chosen his central theme for the work of his human pictures — and it was character.

And therein lay his greatness — in his unerring vision of this as the prime principle of education; and then in his unswerving sureness in holding to it among all the claims and counter-demands of an age that does not recognize this principle in education, and amid all the perplexities of overlaid custom built up with prejudice. He struck through all to the root, and held all to the bar of his prime demand; and what did not hold there was left aside, while from the foundation was being built, bit by bit, the harmonious whole, consonant with this central essential principle.

Some of the world criticised that work as caring nothing for learning. One who knows cannot but feel that they were the unseeing ones. One might as well say that because Michael Angelo's lifetime did not suffice to complete all his work fully, and he left us those great figures still in part unchiseled, he cared naught for finish. One might as well, while gazing at their great symmetry and proportion, refuse to see the intention, and, not even observing the Moses, denounce all as crude.

This is the spirit of carping criticism which, in applying a foot-rule to measure great works, loses sense of the whole, and, in omitting the *would-be* from the *is*, cuts the ideal out of the actual and loses the essence of some of life's best gifts to humanity.

It was not that Colonel Parker loved learning less, but character more. Every brain that worked for the children would have had the training of a logician, the stores of the savant, if he could have willed it so. He longed for these himself and only for that purpose — that he might give them. Every hand that taught would have been the hand of an expert.

But no savant, no expert, by virtue of that claim, could with his consent injure the soul of a child. He with the tongues of men and angels, he with the informations of the encyclopædias, would each have had to stand and deliver his claim to the right to mold the nature of the child with his tools, however wondrous they might be.

It was not that he undervalued the finest instrument, but that the mind should wield the instrument, not the instrument the mind. It was not that he underrated a complete equipment, but that he who possessed such must still show what he would do with it to that little child. And all who know, know how, when that was shown and seen, he longed for the full measure of learning to complete the whole; and to find such teachers, and so to train them, was his life's ideal.

In a choice clear and simple — shall it be character or shall it be learning that we give a child? — no one would hesitate. So much the Christian light that has penetrated has done for us.

But while we utter the choice, and feel safe in the words of it, the subtle and deadly temptations that assail the life of education come in a thousand forms; deadly, because, while we describe character in terms of action, these strike at the root of all, being selfish; subtle, because hidden in many difficulties.

The edifice of attainment being once constructed, and the perpetual question from the first being not, "What can you do with what you possess?" but, "How much more have you gained than your neighbor?" — ambition takes hold; and to ambition is added arrogance, when the top is reached. Then the last state is worse than the first; and some saving grace must come in to undo all.

Then comes the problem unmet as a rule. Is the educational institution to take note of the individual as a human being or only as a machine? Can it be that the affirmative answer is to be given to the latter, when the enormous weight of the influence of the schools on the individual from the first to the last in time and value is considered?

These are the questions that are at stake for the world in our education; and these are the thoughts that make one rejoice that the elements that have produced the School of Education have joined hands with the University of Chicago. And though the School must lose its valued Director, it still has the upholding strength of the President of the University and of the University, to enable it to help to demonstrate the possibilities from the kindergarten through the academic life, and to filter out strength into the nation.

These visions make us glad that the truths sought in these schools may be still sought and found in the University, where the search may ascend into the clear light of learning, in the spirit that is free of selfishness and pride; where learning may be seen to be but new outposts into the vast unknown; and where, when we earthbound creatures dig a little deeper or pierce a little higher, it will not be in the spirit of a race to get ahead, but in the comradeship of an advancing army.

And so shall be found the force making for righteousness, for freedom, for community brotherhood, which our country and the world have need of.

In conclusion, I would say one word for Emmons Blaine.

The President and the University of Chicago have graciously proposed to honor my connection with the School of Education by naming one of its buildings for him.

In that fact I find great honor; and for him and for myself I wish to thank the University and its President. This University just came within his earthly ken, and his mind seized upon its great possibilities at once with all the interest and eagerness of his nature; and it would have been one of his deepest satisfactions to do for it in his own great way. I thank the University that his name may rest upon a place that is the home of so much that he would love.

THE FINE ARTS.[1]

ERNEST F. FENOLLOSA,

NEW YORK, N. Y.

It was about a year ago that Professor Dewey and I were discussing the question whether it is possible to demonstrate that the order of progress in getting the power for an artistic creation in the mind of a single individual — and therefore the psychological order of development of the artist's powers — is practically identical with the historical order of the development of the art powers in the human race. If that could be shown — that the very steps in which in our education today we are training ourselves to get power, mastery, more and more creative ability, are practically identical with the order in which the various races of men have attained that power — we then should get the broadest possible inductive basis for something like a scientific view of education.

I know, of course, that it requires a great deal of material, so that I can merely hint at the line of argument; but what I wish to show is that there is such a parallelism. Of course, when I speak of historical order I do not mean only one order, but that among the several artistic races which have had centuries in which to develop their powers there is practically a unity — among the Europeans in their development from the Middle Age, or the Chinese or Japanese in the order of developing their own powers. I think we shall find substantially the same steps; and just the most general aspect of that is what I am going to try to show, not especially of technical problems of just what we should do, or the application of problems to any school, but a general theoretical foundation, if it can be established, which gives us a valuable starting-point in all special lines of education.

It has been held by some people in America, and I think it is held by the majority of the public, that the real root of art development and of art power lies in representation. That was the old view. That is the old orthodox view. It is not the view of the newer school of educators in art in America, and of course and naturally not my view. But it is the general view that it is the problem of representation to present facts to the eye, which is the key to the development of art. All the histories of art that exist assert that it is the development of more and more perspective, more and more elements of realistic impression, that constitutes the arts in our time. What I wish to say is that that is not true in the history of human art.

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[1] Address, illustrated by stereopticon views, delivered at the dedication of the School of Education, May, 1904, before the Conference on "The Arts."

In the art of primitive ages, among the North American Indians and among the Polynesians, we find the first attempt at symbolic representation, which is the sort of drawing done by our little children of six and seven years today. This is in the historical order of representation generally. Out of this art itself grows. Here we get what you might call typical representation of the beginning of art among all peoples. This is an Eskimo drawing. These are figures of men carrying things in their hands, figures sitting about, etc. It is this sort of drawing that we find upon stone and leather, done by the North American Indians, Polynesians, and South Africans. The question I raise is whether from this as a starting-point of representation we can go on, whether we can go on in a steady line from this beginning to the masterpieces of Raphael. Is there a definite line of development out of this? Of course, I have to make my statements rather dogmatic in order to cover the ground in the time allowed. What this leads to, in fact, is not art, but literature. It is literature because, although of course it is symbolically a statement of fact, it is done through the very elements out of which our hieroglyphic languages have developed. For example, these are forms of Chinese hieroglyphs; this is an eye, a tree, etc., the form in which you find them now on a Chinese page of print. We can trace it all back to this. If we could stop to examine the Egyptian hieroglyphs, we should find that the pictorial representation comes from the forms of birds and animals. This is a root of literature, and it is identical with the place from which the North American Indian started.

Here, for instance, is another Eskimo drawing, a representation of harpooning a whale. This is quite parallel with what our children do in the lower grades. Children will often give us simple dramatic representations of incidents from story or from life, and we marvel at the work. I was looking at an exhibit yesterday at Milwaukee, and it was quite remarkable what the younger children do in this line. But, as you know, and as Professor Dewey himself has pointed out, when you come to the next grades, you do not find continued development. The work done by the children in the first grade is generally not approached in natural power until they come to the fifteenth or sixteenth year, and then they begin to come back, if they have right training, to something like the same power they started with in the sixth and seventh years.

Is it because we have not found the way, or is it that there is no way? My position is that from this beginning there is no way depending merely on imitation or representation to find an orderly development of power. The mind of the primitive peoples could not wish for a realistic prospect, as we do; consequently to them the symbol — the man with arms and legs — gives all the idea of a man that is required. You must find some other form of attack, and what does that come from? What it comes from we can see when we look at primitive Polynesian art. Here we have the primitive beginning of literature used as the elements of power. When you apply this to the structure of design, when it is a question of spacing, the question of arrangement, of quantification of your areas, all that is fundamental, is what makes it art. The fact of its being a representation of men does not make it art; that is literature. The setting is what makes it art. What difference does it make what they represented before they became conventionalized? That may be of interest to the scientist, the archæologist. To the artist they are of interest as they take on order. Take this example of the primitive Peruvian textile. You have, of course, the figure of a man. The fact that this is a man is of interest to Peruvians; it is of no artistic interest to us; but it is a question of spacing, of how the pattern is worked out, that interests us.

Now, the proposition I am going to make — the only proposition — is that the real power of man over the elements of art structure comes, not from the representative element, but from the structural element. That is, it comes from what we do with material things in their actual human and social uses — textiles, clay, wood, metal, stone, all of these substances; and what renders them in their useful forms agreeable to us is the application of pattern to them, if you like. Now we want to see how far this is going to carry us.

This example is a reproduction from the very primitive Assyrian or Mesopotamian tablet of pressed clay of possibly several thousand years before Christ. You have here some form of deer, and here the lions stuck full of arrows. Now, while there is representation here, is there art? No, no art that gives us the key to anything else, because there is no spacing. It does not itself produce anything or give us anything, or give us the key to the development of structure. But if you look at the later form of art, you find upon the façades of buildings, upon stone panels, the running form of the lion, the horse, the hunter, worked into a system of lines which give force to the panel itself, diversifying it into the whole attractive rhythm of lines.

Here is a very interesting drawing from South Africa. It is a Bushman drawing. It represents men driving wild cattle. You might think, and it would be a natural conclusion, that from this the negroes — Egyptians — passed by realistic impression up to the great works of art we know. But there is no such thing. There do not exist any links between this primitive beginning and the great works of art we know.

What we want to know is what the elementary steps are by which progress was made. Now, what shall we contrast it with? Fortunately, we can trace Greek art back to the North American and South African plane. Here we have Greek art in the primitive form. Take these forms of men; they are almost as crude as those of the North American Indian, of the Eskimo, or of the Polynesian, and the horses even more so — much cruder. But the question on which everything hinges is here given very clearly; it is a question of spacing. How shall the lines of the horses' backs and the reins contribute to the idea of motion? In that the whole key to Greek art is involved; and if we have the time to study it in detail, we shall see that with such an idea applied to the problem of structure there is by steady steps a rise to finer and finer and more and more delicate solutions of these problems. And, to state my proposition, what has made the finer and finer line from the realistic side of the drawing is not the realistic motive, but the desire to find finer and finer space relations and line relations. In other words, I would hold that the realistic development grows out of the desire for the finer and finer decorative motive.

There are numerous examples; we get them all through the arts of the world — the oriental, the North American, and the African. Here, for example, are some pieces of pottery, from the point of view of texture and decoration not unlike those of the earlier Greek work. But when we come to aggregate this and take a number of examples from the early pottery, we shall see many interesting things. In the first place, zigzag patterns which go back to the basket work of the North American Indians — exactly on a level with the art we are studying in basketry. The whole question of the line here is only a development into the decorative form of the primitive elements we see in the earliest of the Greek designs.

Here we get the volute in the Peruvian form. Take this example. What do you suppose this is? Certainly, as a matter of decoration, extremely fine; this working up of primitive lines into something complex — the interlacing of all these lines. You can see the leg of the flamingo here. How beautiful it is; and yet, what is it? It might be Greek, but it is Peruvian; just to show how through taking bird forms they work out details. The Greeks largely confined themselves to animal and human forms. In doing that they utilized the lines that we see in nature.

Take another example — from the Greek. We find here all these forms of spirals, and the great patterns upon the shields used as a matter of spotting, and the figures themselves spotted in, used to diversify the other forms of lines.

Now, to take, for example, an oriental specimen. Take an early form of Japanese bronze. Here is a decorative background of the Japanese trinity, made in the seventh century of our era. See how it has utilized lines here in this fine open-work bronze. How strong and full and clear the lines are! It is not easy to trace the relating pattern, it is not too obvious, and yet there is harmony between the curvature in every detail.

Here is an example of what? It might be Greek, because I can show you Greek bronzes of the fifth century B. C. similar to this. This is a Buddhist bronze statue made in Japan in the very beginning of the seventh century. Although it be a detached statue, it had its place in the temple. It keeps the lines of drapery down tightly to the solid substance, not working out the realistic details, but keeping itself within a certain scheme of structure, keeping the lines flowing into each other.

Here we will take an example of Greek work. Here you may say, if anywhere, you get realistic work; but, after all, this figure of the bronze charioteer was no doubt used in some form of architectural background. The long lines, parallel lines, the simplicity of them contrasted with the conventionally æsthetic form of the Greek—this has virility.

In this Corean statue you will see at once the structural form. These lines of drapery swing off in a severe curve to the right; then the working out of the figures into the sharp-cut profile, the expression of the profile entering the scheme of total beauty—all being treated as decorative problems.

I do not like the word "decoration." It seems to imply too much artificiality, a superficial prettiness. The word we ought to use is "structural." The lines, the spaces, the proportions, lie in the structure of the thing itself. The large spaces are given, and then we create upon the background of those the smaller spaces, and we call them patterns. Unless those spaces grow one from the other, they are vicious. I like the word "structural" as a substitute for "decorative."

Now, if we take a Greek form of an evidently decorative panel of the well-known tombstones, we find three figures, the lines flowing from one figure into another through the beautiful crossing of the hands. Here the lines of the drapery work up into the hand and down across the neck.

I do not mean to say that we do not draw the motives from nature. The reason we have worked up so much of nature into our beautiful forms of art is that we have structural, useful, social matters to attend to and to make beautiful, and so we have been drawn along to realize all these subtle lines of beauty.

Take an example of this early stage of Japanese art. Here we have three figures entirely detached, the central figure very beautiful and graceful, altogether four or five degrees of relief, being a wonderful interplay of motives of line. To find another such harmonical and rhythmical work of line we should have to go to almost the greatest work of the Greek itself; and yet this is in the earliest centuries of Japanese art.

Of course, when we come to the Parthenon itself, the structural use is perfectly clear. We finally come to the power to take a rectangular panel like this, and set in the center a figure with all these lines of action, and yet with all the beauty of curvature and the distribution of repeating lines that we find in the earlier Greek art. We get here something more delicate than we have had before. But, after all, this is only a working together of two or three systems of lines. We find a system of lines corresponding with the main figure.

We now come to such a form as this — this detached statue which is set against a façade. What is this? It is Japanese. We have great delicacy in the sway of the whole figure and the modeling of the face.

When we come up to this form of Praxiteles, we get the broader line. There is great grace and beauty, there is proportion, but there is possibly just a little bit too much pride upon the human working out, too much pride upon the power to express a fact and the skill to express that fact; and from this time on there is great danger that the realistic motive shall take the place of the structural one.

And so it is. Let us take just a few examples. If that upward progress of art was comparatively short, there was a long downward fall. Of course, I am not going to say that the only cause of the fall was a desire for realism, but I am going to say that one of the most important was a desire for realistic impression. In such an example as this you have not anything of that primitive simplicity of building, of lines; no order, no meaning, no harmony, no large expression. It is clearly a representation of a violent case of action, but I venture to say without much of the original architectural beauty. Try if you can to draw a line from head to head of these lumpy figures of children; see what kind of spaces it makes. It could not be used as a beautiful decoration upon the façade of anything; the main lines are entirely cut. It is in art as in music, you should get a single tone-impression. You cannot get it there. Even when you come down to portraiture in the late Græco-Roman period, you do not get the sand-papered effect of the face that you might think would go with the forms of gods and goddesses. This is symbolic. You have eyes there; you have the nose; you are getting back to the primitive symbol of realism. Unless it be a visual effect, it is not art, but literature; and literature deals with thought material, abstractions. But when you come to visualizing, then to be art it must be one single impression.

Here is European art at its lowest stage. Centuries after the Parthenon it fell gradually down to this. How can it rise again?

The history of European art contains two distinct periods — that culminating four hundred years before Christ, and that which began in the twelfth or thirteenth century. Our art books would lead us to believe that in this revival there was an effort to return to the old art; but here it was the idea to set the forms of these frescoed angels at the back of this Gothic colonnade, the long lines of the wings making a beautiful cutting of the space. Here we get back to the same key. We started with the primitive structure of material, useful things. We find that, after all, from the beginning it was mural work — the question of treating architecture as if it were a utensil. It is a useful utensil, and to put fine line, whether of graving or color, upon it, is after all only a higher grade of the same kind of structural problem we find in the Greek and Japanese work.

The development of art from Cimabue to Raphael is the development of mural painting. The opposite view is that forced upon us by our modern art galleries. So far as these are old masters, they are only fragments. They have been pulled away from the places for which they were originally designed, which is to set aside their relation to such an architectural surrounding.

When you sit down to paint an abstract panel, you have no key. You have abstraction, you have generalization; you have affinity with no special center by which you should make this space rather than another space, unless your mind is filled with the beauty, the pure musical beauty, of spacing and proportion. The art collection is the dead bones of the older art; it does not show the key which led to their creation. But when you take an example of mural work, that of Raphael on one of the walls of the Vatican, you see the key is given in the architectural arch which is to be filled. You find the figures working up to the particular space; you see the arch of every brow, the swing of every piece of drapery reverberates with the form of curvature. The whole of it is vibrant with the principle of curvature which is already started for you there. And Raphael was perhaps one of the most sensitive of all European artists to the problem of the structure of curvature.

I wish to point out the fact that even in Japanese art mural work is the key. William Morris in one of his lectures said that Japanese art was an inferior form of art, because it had no architectural root. He probably referred to the petty little decorations upon teacups; he could not have meant the older forms, for they are based upon the mural design. For instance, the work on the sliding doors when moved together and shut, the lines of rocks and trees, animals and birds, work across the whole just as structurally as they do in our own work, but using that side of nature for building up great space structures. In this example see the grandeur of the line — how nearly the sweep of line is like the old Greek; how large the spaces, like the old Corean; the simplicity of the line, just like the old Japanese bronze; the massing of the heads together at the top; and then the great cool spaces of the drapery of the main figure below. This is a specimen parallel to the work of the old Japanese. But when you come to look at that in marbles of low-relief cutting, for the façades of buildings, or for interior panels, you find here a very primitive and naïve representation of the classic form made into the renaissance by a new decorative treatment of these lines of drapery, by the filling in of the space by a wonderful system of rhythmic lines. Right side by side with this I like to give the figures of the bronze screen enlarged. In this low-relief work, these Buddhist angels, child-like figures, seated upon lotus leaves — the Nirvana — you get a wonderful working out in forms, just as Donatello worked out child figures. However, the point is that the realistic element here comes out of the desire to make the deeper structural or decorative effect.

Let us go back to Raphael. In our time Raphael has been somewhat decried, and from some points of view rightly. He was no master of light. The questions of line and light are not the same. I am not speaking of quantification of light, only of areas. Raphael was not a master of light in the sense that Velasquez was. But as a master of line he stands at the top. If you were to enlarge any one figure, it could be mathematically shown that the amount of curve is exactly the same, is rhythmical, all through his work; we have perfect sympathy in all the structure down to the finest degree. He first thought of the whole structure, the main spacing, the system of rhythm, and then worked out the details.

The other great master of structure was Michael Angelo. You might suppose that Michael Angelo, because he worked for twelve years or so upon anatomical studies, was governed by the motive of realism, and that you have got to stuff your mind with facts, and then, peradventure, when you have got hold of facts you may begin to create. That would be like requiring a candidate for literature to learn the dictionary. To learn to write is to express yourself as would a child. The artist today of the academic school in New York or Chicago will tell you that it is useless to attempt to teach children any serious art until they are about sixteen years of age. But the natural expression of a child which begins in his sixth or seventh year can be carried on to fit his desire to space and create rhythms therefrom; and if you give him that, he will carry it on to greater development. In Michael Angelo we can see that never did he take these facts of anatomy and abuse them by using them to state facts. As you see here in one of the figures from the Medici tombs — this individual odd attitude of the awakening body, the drowsy head, how all the various forms of lines in it are sympathetic and related to and vibrant with the meaning of the line given below. And it is so with the work of the frescoes upon the ceiling of the Sistine Chapel — each having the greatest fidelity to anatomical fact used to express a structural unity.

Going back from Michael Angelo, the culmination of the second European period, to the Parthenon, the culmination of the first period, let us look at this example. Here is a system of lines passing from the upper left-hand corner down to the lower right; but between these two main systems of lines there are the transition points. The lines of one pass up into the lines of another, twist about, and return. Everywhere spacing is considered — the question of this space as a solid mass against this other space; the large relations of line are not in the least interfered with by the lesser lines.

I gather that I am regarded as a "Japanese" man, and sometimes I have heard students at a university say: "Oh, where is the Jap?" I certainly believe that Japanese art has an immense amount to teach us. To treat landscape as if it were a very serious way of building, and a splendid way of building, with the Japanese is centuries old. This is a very rich example indeed. It seems at first odd to you, because you are not accustomed to it. The aggregate structure is composed of two main systems of lines, then we have a curved system of lines working up without confusion, all being built up in an orderly way. In another way, there is just as much rhythm of angular and curved relation, of spacial unity and proportion, in this work as in the figure work of the old bronzes, or nearly as much as in the great Greek examples.

One of the greatest of all masterpieces of great structural work is this of Michael Angelo; how in the first place the stems of this mass of writhing members come up, and then swing out into lines which have the double curvature. Perhaps this is one of the most complex examples, combined with unity of dramatic motion and spacing in relation to the architectural problem, that we have.

But from the day of Michael Angelo, what became of European art? Why didn't they do more of this? They had the buildings — why didn't they do it? Well, just about this time — a little before — there came in the desire for realism, just as in the Greek art seventeen hundred years before, and we find artists in Florence and other parts of Italy undertaking the study of just the natural muscles of the ordinary figure. This is purely a study of muscles and of the emaciated human figure, and just how to represent it as a realistic fact.

Michael Angelo even in his grandest moments never lost sight of the structural key. The other, lesser artists branched off in the desire to represent. If you take a bird's-eye view of European art of the sixteenth century, you will not find the architectural structural key with which European art was vital one hundred years before. How inferior it is to the old Greek and even the Peruvian ideals! Excrescences are allowed to interfere with the main line; so that the key to two things is lost: the key to the real representation of the figures is lost, on the one hand, and the key to mural decoration is lost, on the other.

What we come to is this realism in modern French and American art. Is there order here, is there interplay of line? The artist who did this has not the vaguest conception of the principles out of which the art power of the early Greek and Renaissance periods grew. Nine-tenths of the artists have not the least conception of the elements out of which true art grows. But a change has come into our American art within the last twenty years — a return to the mural, structural idea. I remember John Le Farge, about twenty years ago, in speaking of the art schools saying that there is only one chance for art in America; if it were possible to divert the faculties of American artists into mural work, we might have a revival of art. Robert Blum was sent out by the Harpers to make little representations of Japanese effects for illustration. Incidentally, while in New

York, he had the chance given him to make a great fresco, and at once he leaped into his right place — forced to drop his little delicate spotting, and treat the questions of line and space as the very elements out of which he built his structure.

Now we come again back to the Old World. We are here back with the great masters of Japanese, Greek, and Renaissance art, because the whole problem of line — the space-proportioning and unified line rhythm — those two things work together.

This is just the work of a modern art student. You see there is no attempt to show where it should be put, to treat the whole thing as a real rhythm. We have traced Greek art back to basketry. Now those might be Indian baskets, but they are not. They were made in Minneapolis. They are the product of the school children in Minneapolis. I am sorry to say they were burned up last year in the state exhibit, but they can make others as good. But here we are right back at the primitive root of art.

I had people in Minneapolis come to me, people from the newspapers, and they wanted to interview me on the question, because they called this a fad — all this sort of work. They said: Why should we, who are civilized people, today go back to barbarous art? I should say at once, because this is the backbone of structure. If you have mastered the main relations — even in the lines of such a pattern as that in two tones — to a structural problem, you have got the foundation on which to build; and from that upward to the Parthenon and to the Sistine Chapel is only a question of steps. But if you do not begin with that, you will lose that which gives the force and vitality to your work. If you attempt to begin with the complex without learning the simple, you will dally all your lives in confusion.

I want to go back to the beginning of European art, to the decorative work done in bone. What a wonderful work it is! They have taken the lines of animal forms and worked them in the form of handles and bodkins. All this is exactly in accordance with the line of structure, the principles upon which the art of the world has grown. Between this and the Parthenon we can trace almost every step of the growth. Between the Eskimo and North American drawings and the realistic drawings, the treatment of the modern school, we cannot find any lines of transition or a normal growth.

Take this example of a bronze head. This is a Greek fragment. You have the line of the horse's head worked out into a more beautiful structure than ever before. All these lines, the whole setting, the character, comes from the spacing and the lines. Between this extreme piece of Greek work and the work of primitive man working on bones we have a line of transition.

This is the upper part of a painting by Georgione. How grandly he has given us open spaces! The Japanese love the open space. Mr. Whistler loved open spaces. It is the actual vibration of an area that is the groundwork of visual art.

Landscape is a comparatively modern thing. It is hardly given its full rhythm except among the Japanese. One might spend hours and hours, and yet not exhaust all the structural details in such a work as this. Of course, it is not a work of our day, but it is a work we might do well to study. It is a hobby of mine that there is nothing to prevent our artists today from doing just as serious work, just as good, as far as line is concerned. The problem of dark and light, of color, require a different faculty. You may begin with spotting — a formless treatment of line and color — if you choose, but it is not an orderly way to develop. Whatever you may do with your quantification of light, you cannot get rid of the necessity for spacing. If you have not fine spaces, no matter how you may trick them out with color and light, they are not strong art.

Now, from this point of view today I have tried to take you over all sides of human art, to see something of the unity that underlies all art. Perhaps you may not allow all that I have claimed, but I thank you for the attention you have given to this argument.

LIONEL OF ORKNEY — A ONE-ACT PLAY.

JENNIE HALL,
FRANCIS W. PARKER SCHOOL, CHICAGO, ILL.

THE following play was written by an eighth grade at the close of nine months' work in literature. During the preceding year this class had made a study of chivalry and of other mediæval institutions. For its eighth-grade work such literature was chosen as would complete and beautify the imagery resulting from that historical study. We read in class Tennyson's "Coming of Arthur," "Gareth and Lynette," "Sir Galahad," and "The Lady of Shalott." The teacher read to the pupils Malory's version of "Launcelot and Elaine," and of the Gareth story. At the same time each student was reading at home two or three books of the Arthur stories retold for children — Frost's *Knights of the Round Table,* Radford's *King Arthur and His Knights,* Pyle's *Story of King Arthur,* Bulfinch's *Age of Chivalry.* As a result of reading these different authors there arose the question of the sources and treatment of the stories.. The study necessary in answering this question created among the class a new feeling of imaginative freedom in story-telling, and an appreciation of the artistic qualities of a tale and of the possibilities of the craft.

As a direct preparation for the writing of this play we spent two months in training ourselves in literary composition. After the pupils felt some confidence in their power to write a readable thing, we set to work directly upon the play. Different members of the class submitted the skeletons of plots either original, or transcribed from stories read, or partly original and partly suggested by reading. We worked these plots over in class, and finally compounded into one some ideas of Tennyson's, of Malory's, and of our own. Malory's quaint English had caught the pupils' fancy, and they decided to try to imitate it. This entailed a more careful reading of parts of *La Morte D'Arthur,* with attention focused upon the diction.

The class made a distinct effort to have this play simple. We spent some time discussing means to this end. Plays are frequent in our school, and as a consequence the pupils had sufficient experience to make the discussion valuable. They decided to have no change of costume or of scenery. They had just seen a French drama in one act. This plan was the solution of their problem of simple staging, but it added to the difficulty of the composition of the play. The whole plot had to be reconstructed to occur in one place and at one time. This simplicity of plan is to one the best point in the drama. It very much pleased its authors, also, at the final working-out.

The play is a class composite. Sometimes parts were written at home, read in class, accepted, rejected, combined, changed, to please the social opinion. Sometimes the composing was done at first-hand and red-hot during the recitation—a bit from one person, an addition by another, a change by a third, a general expression of acceptance. The prologue was written in two parts by two pupils. It will be found to savor strongly of the prologue to *Henry V.*, which captured the imagination of one of the boys.

The story was acted on a stage bare of scenery, with only a rough table and a few old-fashioned cooking utensils for properties. The costumes were simple. They were used, not with the idea of correctly presenting a time so vague and so inaccurately known, but with the purpose of making the stage picture beautiful and sufficiently unusual to cause the auditors vividly to realize that we were representing an olden time.

The play is presented here because it is thought that any suggestion toward simplifying and pruning school plays will be of some use.

PROLOGUE.

If this poor stage were but a kingdom with kings and knights to act, then could with all his glory, Arthur, the mighty king, come forth and do deeds of knightliness. But here one person must take the place of hundreds. Suppose within this stage is Arthur's mighty kitchen, with fires blazing and spits of meat sputtering gaily, with hundreds of kitchen knaves at work preparing the great feast of Pentecost. Table after table stands surrounded with knaves rolling, kneading, and slicing food for the feast.

Outside this royal kitchen is Arthur's castle, the center being his hall, around which stand the keep and other buildings. Surrounding these is the castle wall, with huge towers which seem to loom up to the very sky. Inside the great hall throng the knights in shining, long-skirted armor of chain; the ladies in splendid gowns; and the many subjects, seeking justice and receiving it from their noble king.

He is seated on his throne of golden dragons, garbed in a robe of red samite broidered with golden dragons, and the dragon crown is on his head. But here, with all this glory and this splendor, the most glorious of all is Arthur's noble manner, and his kindly face that seems to look down upon his people and bless them, as the sun blesses all on which it shines. Here, truly, is the glory of the land — a king who wishes his knights to reverence and honor their sovereign, to live a pure life, to speak the truth alway, to right the wrong that comes within their paths, and to do ladies, damsels and gentlewomen help whenever it is needed. And so strong is Arthur's influence that all the knights of the Table Round strive to gratify their noble king's desires that they may be well worthy of knighthood.

LIONEL OF ORKNEY.

[*Scene: Arthur's kitchen. Lionel telling story. Servants listening.*]

LIONEL. And forward rode a knight, all clad in rusty armor, and threw down his glove at the Sparrow-hawk's feet, saying: "Thou shalt repent thy insolence to Queen Guinevere." To this the Sparrow-hawk replied: "Thou art the one that shalt repent." Thereupon they withdrew to their stations and dressed their spears. Then with a mighty shout —— *(Kay enters; stamps his feet.)*

KAY. Idle knaves! Get ye to work! You do naught but talk. *(Servants scatter.)* And you, Sir Fair-hands, is it not enough for you to lumber the kitchen without keeping the others from their work with your silly tales? *(Enter Geraint.)*

KAY *(turning to Geraint)*. By my troth, Sir Geraint, I came unto the kitchen and found this young knave telling one of his fairy-stories. What think ye of it?

GERAINT. Be thou not too hard on them. Is not the work done?

KAY. I do believe it is.

GERAINT. Shall these poor knaves, then, have no leisure? Speak gently to them. A kind master makes a willing servant. *(Exit Lionel.)* See how he carries himself. I think, Sir Kay, this Lionel is of noble birth. He tells the tales rightly and he knows all the events of chivalry.

KAY. Bah! The listening knave hath merely caught the manner of his betters.

GERAINT. Time will prove. *(Exeunt Kay and Geraint. Enter Lionel carrying stick as a lance. Servants laugh.)*

FIRST SERVANT. Behold! Sir Lionel of the crooked stick!

SECOND SERVANT. Doth any weak-heart here dare to meet yon noble knight? If so, let him stand forth.

THIRD SERVANT. I, the conqueror of Arthur's kitchen, do here, in way of challenge, throw my gauntlet at your feet. *(Throws dish cloth.)*

LIONEL. Do you so hunger to bite the dust? Prepare, false knight! *(They rush together and wrestle. Lionel wins.)* Behold the conqueror of Arthur's kitchen laid low. Who next will —— *(Clash of arms outside. Servants rush out. Noise of conflict. Shouts.)*

KAY *(outside)*. Niccon! Lionel! Safir! *(Appearing in door.)* Lionel's doing! *(Servants enter shouting, with Lionel on their shoulders.)*

SERVANTS. Lionel, defender of the helpless! Victor of the courtyard! Sir Lionel of the baking table!

KAY. Fools! What mockery is this?

FIRST SERVANT. Go ask yon knight who lieth in the courtyard.

SERVANTS. Most noble Lionel!

KAY. Niccon, get you to the forester. Bring me back the peacocks for tomorrow's feast. Lionel, to the peat-bogs! *(Niccon and Lionel exeunt.)* *(Kay. Turning to others.)* Now, tell me with goodly haste the cause of all this stir.

SECOND SERVANT. Two knights were at a bout in the courtyard.

THIRD SERVANT. And one was unhorsed and lay on the ground in a swoon. *(Geraint enters and stands in door listening.)*

FOURTH SERVANT. The coward Modred heeded not his helpless plight, but rushed upon him with lowered lance.

FIFTH SERVANT. When forward Lionel sprang. He seized the bridle and with mighty force sent the horse back upon his haunches.

SIXTH SERVANT. And Modred rolled in the dust.

GERAINT. What! Is Modred down? Methinks the lad hath done right well. It is a sore shame that a knight of the Table Round should so demean himself. There speaks the lad's noble blood, meseems, Sir Kay.

KAY. Mayhap, but I doubt it. *(Enter Niccon and bows to Kay.)* What wouldst thou?

NICCON. I come from King Arthur. He would see Sir Geraint and Sir Kay in his chamber. *(Exeunt Kay and Geraint.)*

FOURTH SERVANT. Geraint is sore loving unto this Lionel.

FIFTH SERVANT. Yea! Is he better than we are that he should be thus over-praised?

SIXTH SERVANT. Natheless he is wonderly strong.

THIRD SERVANT. Ay, but he knows it..

FOURTH SERVANT. Yea, truly! How doth he strut up and down like a peacock with its tail spread!

FIFTH SERVANT. How like a beggar he looked a few months back when first he came to Arthur's court! *(Enter Lionel).*

LIONEL. Cowards! Stint your noise! What say ye of beggars behind my back? For wit ye well I am no beggar. I am a king's son. *(Servants laugh.)*

SECOND SERVANT. List how he plays the overlord!

THIRD SERVANT. A king's son! Marry, but he looks it.

FOURTH SERVANT. Methinks your father ne'er saw a knight.

FIFTH SERVANT. I will tell you this Lionel's cognizance. It is a frying pan with a dish clout rampant.

LIONEL *(striking the speaker)*. Dog! So be to all insulters of King Bors of Orkney!

SIXTH SERVANT. How comest thou here, then? Thy fame is naught more than mockery. Yea, it seemeth me that my father is Leogrant, king of Northumberland. *(Enter Lady Blanche.)*

LADY. I seek Sir Launcelot. Pray, is he here?

SECOND SERVANT. Nay, but here is Sir Lionel, knight of the crooked stick. Will he not serve?

LADY. Knaves, be quiet! Tell me where the noble Sir Launcelot abideth, if ye wot it. But who is this Lionel of the crooked stick?

THIRD SERVANT. A noble knave of scullion blood. *(Enter wounded knight.)*

KNIGHT. What seekest thou here, fair lady? The kitchen is all too rough a place for thee. If it were not for this young Lionel that hath saved my life, I would not myself be here.

LADY. I seek the most pure knight in all the world. Only such an one can serve me. Yonder in her castle bideth my fair sister, imprisoned by three wicked knights, who guard the castle-gates. Before she can be free, these robbers must be slain by this sword. It was girt to my waist by the charm of a wicked enchanter and cannot be drawn save by a stainless knight. Many years have I traveled on this quest. From Charlemagne's dominions to the land of the Holy Sepulcher have I wandered. Many a knight hath assayed, and one and all have failed. Much mockery have I sustained. I pray you, Sir knight, make trial.

KNIGHT. Ay, that I will. But if I succeed not, will ye let yon kitchen knave try his skill? For wit ye well he deserved it. He served me right nobly this day, when I was unhorsed.

LADY. It is passing strange to see a knight set store by a kitchen knave. Yet did I hear that I should see wonders in Arthur's court.

LIONEL. Ay, noble lady! But not in the kitchen bide the wonders. Saw ye not King Arthur throned and crowned? There standeth the great glory of our land.

LADY. Soothly have I seen him, and my heart shook at the sight. Verily I thought I looked into heaven and beheld Sir Michael or Sir Gabriel or other archangel. But I marvel to hear such knightly words upon the lips of a scullion.

Knight. It all betokeneth some mystery about this Lionel, I wist. He hath the marks of knightly blood, meseems.

Lionel. Oh, the lady with whom I dwelt erstwhile hath been kind to me. I companioned with her sons.

Lady. Ay? Lieth knightliness, then, in the friends a man keepeth and not in the blood? *(Turning to wounded knight.)* But now, Sir knight, make thine assay. *(Knight tries to draw sword and fails.)*

Knight. I am not the knight for thine adventure, and sore it shameth me.

Lady. Nay, be not so heavy. All the knights of the Round Table have made trial but now, and no one hath stirred it a whit.

Lionel. What? King Arthur? Hath he tried?

Lady. Ay.

Lionel. And Sir Percivale?

Lady. Ay.

Lionel. Then art thou doomed to wear it all thy life, I fear me.

Knight. Yet do thou try. It is the day of Pentecost, the day of miracles.

Third Servant. Beware! His greasy hands will soil the hilt.

Lionel. I wot well I am not worthy, but I fain would try. Sure no harm can come of it.

Lady. Yea, set thy hand to the hilt, good youth! *(Lionel draws sword as King Arthur enters.)*

Lady. I am free! Behold, Sir King! I have found my knight.

Arthur. Most noble Lionel, this day hast thou proved thyself worthy of knighthood. And thy rank, too, well deserveth it; for hither hath come but now a messager from thy lady mother, Queen Bellicent of Orkney. She hath told me of her sore heart and of thy disguise. Little wote she that the love of knightliness was so strong in thee that thou wouldst stoop thy head beneath the kitchen roof to become a knight.

Lady. Art thou the son of Queen Bellicent of Orkney? Then must thou be of noble blood. What meanest thou by that tale of the kind mistress and her sons that thou hast told us of?

Lionel. Now let me prove you that this tale is true. The mistress is my mother, and her sons my brothers. I vowed unto my mother ere I came here to keep my name a secret for a twelvemonth and a day.

Lady. And thou didst guard a favor as thou didst guard thy vow, it would honor any noble maid to put one in thy keeping.

Lionel. I have not yet a casque wherein to set it; yet if of thy grace thou wouldst grant me thy favor, mayhap I might sometime win to a helm.

Lady. Here, then, Sir Lionel! Guard it well. And here do I gird thee with this sword that thou didst free me from.

Lionel. Fair lady, I am not yet a knight, though I fain would be. Yet this I will vow, that as soon as I become a knight I will undertake thine adventure.

Arthur. As for that, it is in my heart speedily to amend thy case.

Kneel down and lay thy hands in mine, and swear to reverence the king, as if he were thy conscience, and thy conscience as thy king; to break the heathen and uphold the Christ; to ride abroad redressing human wrongs; to speak no slander, no, nor listen to it; to honor thy own word as if thy God's; to lead sweet life in purest chastity; to love one maiden only, cleave to her, and worship her by years of noble deeds; to love the truth and all that makes a man.

LIONEL *(drawing his sword)*. On this holy rood I swear to take upon me and to keep all these vows of chivalry.

ARTHUR *(giving him the accolade)*. In the name of God, of St. George, and St. Michael, I dub thee knight. Arise, Sir Knight!

[*Curtain.*]

WORK WITH MINERALS FOR LITTLE CHILDREN.

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THE work which is here reported was chosen primarily because of children's pleasure in collecting and owning stones, and because the recognition of the common minerals is an essential basis for intelligent work in geography. Several different kinds of work contributed to the better realization of the subject. Reading, writing, mathematics, and manual training aided in the development of the children's plans in much the same way that these subjects would be utilized by an adult in doing a piece of work. When an architect plans a building, he makes his drawings, estimates his strains, writes his letters, gets his information from books; and because he is not in the process of being educated, these parts of a piece of work are unclassified; he is making a house plan. The group of children whose work is reported were trying to classify a collection of pebbles from the lake shore. They made boxes from cardboard to hold the stones; they wrote records of experiments and compared notes; they read to find what other children had done in play similar to theirs, and to get directions for carrying out experiments which they themselves could not plan. Because they are in the process of education, their work is divided, and this part is called manual training, that part number; this recitation reading, and that one writing.

The work was done by a group of children in the University Elementary School, half of whom were beginning first grade, the other half beginning second grade. The series of lessons occupied, approximately, one hour daily for six weeks. The first stones to be classified were quartz, since they were most attractive on account of their sparkling whiteness. Each stone was tested; if it would scratch a piece of glass, the children identified it as quartz. Regarding those which remained, questions arose as to what they were called. A series of experiments was made to determine this. Most of the children were familiar with lime as the chief ingredient of mortar. At the teacher's suggestion, they put some acid on pieces of lime, and discovered that in every instance this caused effervescence. They tested the mortar with acid, and found that it too effervesced. Thus they established a means for discovering the presence of lime.[1] When they tested one of their stones and found effervescence, they understood that it contained lime, and they were given the name "limestone." They proceeded to sort out the limestone in their collection.

The next step was to label both the quartz and the limestone. The older children wrote the labels for themselves and for the younger group. This necessitated a writing of the words "limestone" and "quartz" some twenty times, and for the younger group it required frequent recognition of the written words during the process of labeling.

Another day, as work to be done alone at their desks, the older group were given a glass rod and a shallow dish containing a little hydrochloric acid; also a plate on which were substances consisting mainly of lime. They were left to test these materials and write their results upon the blackboard. The new words which they would need in writing were the names of the materials tested, and a list of these was put upon the blackboard for reference. At the end of the period the record was examined with the children, and both subject-matter and written form were discussed. Any differences of opinion regarding results were settled by trying the experiment again. These details in regard to unsupervised occupation are given simply to illustrate a type which in its nature is adapted to independent work. The result desired was independent judgment of each child; hence it was reasonable to work alone rather than in a group. The training in skill and carefulness which comes from the handling of materials in experimentation is very great; therefore each child should have his own set of materials and time to do the work alone, while the writing of the result summarizes the experiment in the child's mind. In this case the seat work was more valuable than a recitation. The distinctive value of seat work needs recognition. It is too often looked upon as an unmitigated evil to be endured only because of the necessity for economizing the teacher's time. However, to make unsupervised work most effective it must be followed each time by intelligent criticism.

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[1] The effervescence, of course, is not conclusive evidence of lime, but of some carbonate; the general appearance of the stone taken with the fact of effervescence was sufficient in most cases to enable them to identify the stone as limestone. —[EDITOR.]

After their own experimentation, the children read the printed record of another group who had tested the same substances:

We went hunting.
We did not take a gun.
We took acid.
Guess what we were hunting for.
We found it in marble and limestone.
We found it in bones, shells, and chalk.
We found it in lake water.
We found it in the soil in our school yard.
"Lime seems to be in a great many places," said Charles.

The children were shown some beautiful specimens of coral as typical products. They were much interested in them, delighting in their beauty and their resemblance to common things. The group made the following account of coral in order to tell the third grade what fun they were having:

CORAL.

(WRITTEN BY FIRST-GRADE CHILDREN TO SEND TO THE CHILDREN OF THE UPPER PRIMARY GRADE.)

We are studying coral.
We wanted to tell you something about it.
The coral is the skeleton of an animal.
This animal is called a polyp.
It lives down in the sea.
Often it is about as big as a pinhead.

Sometimes it is much larger.

It fastens itself to a rock.

The polyp's children grow on top of the polyp or the side of it.

They grow together in bunches.

After a while the animals in these bunches die.

The hard inner part is left.

This is the coral.

We had some coral that looked like trees with snow on them.

Some people think this kind looks like the horns of deer.

There is some coral that is round with funny little veins.

Some people say this looks just like a man's brain, only it is white.

There is a kind that is yellow.

It looks like cauliflower.

The red coral looks like firecrackers.

All the coral has lime in it.

The children began to make the account collectively, but at the end of fifteen minutes, when it was time to go home, the result was haphazard and incomplete. At home two of the children dictated an account of the coral without help or suggestion. These accounts were written upon the board and criticised by the children wherever they thought them not intelligible. This critical reading by the children of what they have written is urged as valuable training, not only in English, but also in clear thinking. The child holds in mind his audience, and there is a stimulus to complete expression similar to that which is lent to oral expression by the presence of a listener.

Much self-consciousness and the ensuing timidity may be avoided by making the very first writing an expression of opinion rather than a test of skill in reproducing a word which is not a genuine expression of thought. This was illustrated by the younger group as follows: One of the older children asked what coral was made from. In answer, both the older and younger groups were sent to the blackboard, and after a piece of coral had been tested with acid, they were asked to write the name of its material. The older children wrote at once the word "lime," and one of the younger children attempted it. He was helped to write the word, and a second piece of coral was tested. This time all the children, with one exception, attempted to write it. The results were crude, sprawling, and often unrecognizable; but the attempt was freely made. The testing of the coral was repeated with each of the seven varieties, and each time the child wrote what he inferred from the result of the test. Thus every repetition in writing was an expression of individual opinion. It was the first time they had been asked to write anything, and this word they had seen many times both on their labels and upon the blackboard. When an opinion is the matter in hand, the writing becomes incidental to it, and the child is conscious of trying to say something rather than to produce an effect.

Among the pebbles we found some geodes containing quartz crystals, but these were so small as to be unrecognizable in form. Therefore large and more perfect crystals of quartz were brought to the class. These included smoky, rose, and milky quartz, topaz, and amethyst. Because these all scratched glass the children identified them as quartz.

They read the following reading-lesson printed for a former group of children and partly composed by that group:

QUARTZ.

I.

One day some children went to the lake shore.
They found many kinds of pebbles.
Some of the pebbles were white and smooth.

They sparkled in the sunshine.

They were harder than glass.

They scratched glass.

These were quartz pebbles.

All quartz is hard, but not all quartz is white.

Some is pink, some is brown, some is purple, and some is yellow.

II.

Have you ever seen quartz crystals?

A little boy said: "They look like icicles!"

Do they?

A little girl said: "They look like fairy church spires!"

What do you think they look like?

Wonderful fairies must live in the ground!

We find so many kinds of crystals in it.

Some look like sheets of paper.

Mica crystals look like that.

Some are cubes.

Some are brick-shaped.

Some are pyramids.

III.

A little boy thought that white quartz crystals were glass.

Was he right?

Rub some sand on glass.

It scratches the glass like quartz.

Sand is little grains of quartz.

Men make glass of quartz sand and lime.

They put sand and lime in big clay jars.

They melt the sand and lime in the fire.

Then it looks like molasses.

They put a long tube like a horn into the soft glass.

With this tube men can blow it into the shape of bottles, vases, and lamps.

Quartz is not glass.

But glass is melted quartz with lime in it.

Illustrations of the crystal forms mentioned in II were shown by specimens of galena, fluorite, calcite, mica, and finally by some large maple-sugar crystals. The children tried to find out what the last mentioned crystals were, using the acid test and the glass; but both failed. One child smelled them, and great was the astonishment of the entire group upon tasting these crystals.

They were enthusiastic to make sugar crystals, and the directions for work were given in writing whenever these were sufficiently simple. Necessary explanations were thrown in orally.

When the crystals were made, the children composed the following recipe, which applies equally for making crystals of salt, alum, bichromate of potash, and copperas, from all of which good results may be obtained:

RECIPE FOR SUGAR CRYSTALS.

Take some cold water.

Add sugar until no more will dissolve.

Put the water over the fire to boil.

More sugar will dissolve in the boiling water.

Again add sugar until no more will dissolve.

Then set the dish where it will cool.

In two days the crystals will come.[2]

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[2] Two years ago, when we made sugar crystals for the Christmas tree decorations, we received information from a wholesale rock-candy manufactory which was of great value. Upon request, this information is reprinted from a back

In order that the children might see a greater variety of crystals, the class spent an hour in the crystal exhibit at the Field Museum, where they gained a much better idea of the definiteness of form and the beauty of crystals.

While we were in the museum we saw some fine examples of fossils, and the children were interested in recognizing the "pictures" on them. When later we found some little fossils on the lake shore, their delight was still greater. The teacher was curious to know how they supposed the impress was made upon the stone. One child only thought that the Indians had made it. Most of them thought the pictured object fell upon the stone, but two of the children without suggestion thought out the actual process. The fact that they had made limestone in a previous lesson gave the clue, for they could think of limestone as hardened mud. In order to test the theory of these two children, each child made upon a lump of clay an impression of a shell or leaf or flower and left it to harden. While this result proved nothing, it strengthened the possibility of a similar method of fossil formation.

For the purpose of binding together in the minds of the children partial results, fragmentary discussions, and individual opinions, the following reading-lesson was written. It summarized the work of several days.

number of the Elementary School Teacher, now out of print.

Forty pounds of sugar.
One gallon of water.
Stir only until sugar dissolves.
Boil to 234° F.
Keep at a temperature of 70° F. or above for three days.
Avoid any jarring.

The first necessity for attaining large and clear crystals is to use sufficient material, so that a considerable weight may be produced. Occasionally thermometers vary slightly, so that 234° F. does not produce the proper density, but this may be discovered in about five minutes after the syrup has been poured out to cool. By that time a coating has formed on the top which if rough and irregular indicates successful crystalization. If it appears smooth and glassy, the syrup must be boiled and brought to a temperature two or three degrees higher than before.

FOSSILS.

There are some wonderful stones in the Field Museum.

They are called fossils.

Some have the print of fern leaves on them.

Some have the print of fishes on them.

One has the print of a palm leaf.

We found some small fossils on the lake shore.

They have the print of shells on them.

These fossils were in limestone.

We wondered how the picture was made.

We thought the shell fell on the stone and left its print.

But we could not press shells into hard stones.

We remembered that when we made limestone, it was first mud then it hardened into stone.

We thought the shell must have fallen on the mud and made a print; then the mud must have hardened into stone.

We made prints of leaves and shells and flowers in clay.

It only took one night for this clay to harden; but the fossils were made thousands and thousands of years ago.

They read with much pleasure the following story, written by Flora J. Cooke.

THE STORY THE FOSSIL FERN TOLD.

Once a family of ferns lived in a forest.

They did not care for the bright sun.

They liked the cool shade under the trees.

They liked the moist soil by the forest lake.

One little fern grew close to the edge of the water.

She bent down toward the waves.

The waves rolled up toward her.

For a long time they did not reach her.

But after a while great storms came on the lake.

The water rose higher and higher.

Fine, soft mud came with each wave.

It covered the fern and all her family.

Year after year the storms came.

The mud grew deeper and heavier over the fern.

Do you think anyone ever saw the fern family again?

Many years after a man came to the forest.

All the old trees were dead, but a few of their grandchildren were there.

The lake had gone away.

But the old father river was not far away.

The soft mud could not go away.

But it, too, had changed.

It was now hard rock.

The man knocked upon the rock with his hammer.

Then the rock gave a leaf from his stonebook.

There was a picture on it.

It was a picture of the little fern.

There it was, the leaflets, midrib, and veins.

The man could read the stone's story.

It told him how the fern grew by the forest lake;

how the waves covered it with mud; and how the mud hardened into stone.

Can you read the stone story of the fossil fish?

As soon as the pebbles were classified, the children needed a place in which to keep them separate. We planned a box which should hold four cubic inches. After they had some knowledge of kinds of stones, we counted eleven varieties which we wanted to keep; namely, sandstone, limestone, quartz, granite, chert, pudding stone, marble, greenstone, sugar crystals, fool's gold (iron pyrites), and also shells. We made twelve small boxes and then a large one to hold these. The children experimented to see which was the best arrangement of the boxes, whether three by four, or two by six, or twelve by one. Each child chose his own way and made the pattern for this large box. When the pattern was completed, the children transfered it on to bristol board by means of carbon paper. Because of the strain upon the large box, strips of soft sheepskin were used to fasten the corners together, and instead of sewing or gluing these, brass-headed paper fasteners were used as more secure and more sightly. The total expense of each set of boxes was something like three cents.

The number relations and the geometrical conceptions which were applied in the construction of the boxes were so numerous and so well adapted to children of this age that they are enumerated below. They are: the making of a four-inch square (repeated twelve times); the idea that opposite sides of a rectangle are equal and parallel; the fact that two fours are eight (used in cutting binding-paper for the corners of each box); use of one inch, one-fourth inch, and one-eight inch (needed in making large box); conception of four cubic inches, one cubic inch, and the relation of numbers from one to twelve. The problems which arise are not only varied and well adapted, but are so frequently repeated as to furnish sufficient drill to fix them in mind.

This series of work upon the stones furnished a considerable amount of independent work. The younger group spent one half-hour daily for five weeks in the making of the small boxes.

The older children made a blank-book with alphabetically arranged pages like a dictionary. As soon as new words were gained in writing, a copy of them was put into this book for reference. The making of these books and the use of them occupied approximately six periods. The testing of the materials for lime and the making of the imitation fossils required two periods. One period was planned in which the children were to make the crystal forms in clay and color them as a partial record of the Field Museum trip, but time did not permit.

The following directions for the making of the small boxes were written to take the place of oral directions:

DIRECTIONS FOR MAKING SMALL STONE BOXES.

I.

Make a four-inch square.

Find the upper left corner.

Make a dot one inch from this corner on the left edge.

Make a dot one inch from this corner on the upper edge.

Make a dot one inch from the other corner on the upper edge.

Make a dot one inch from the other corner on the left edge.

Make a dot one inch from each corner on the right edge.

Make a dot one inch from each corner on the lower edge.

Find the dots that are opposite.

Draw a line between the opposite dots.

Cut out the square in each corner.

Lay your ruler on the lines that you see.

Then fold the four rectangles upward.

II.

The corners of the box are open.

Cut a piece of[3] binding-paper two inches long.

Fold the short edges of the binding-paper together.

Place the crease at the corner of the box.

Fasten the corners together with this binding-paper.

Written directions for work which is to be done furnish a valuable form of reading, in that reading appears to the child in its legitimate function, namely, telling something that he needs or wants to know—quite different from that well-known type: "This is a cow. Do you see the cow? I see the cow;" and different, too, in its appeal from some less obviously empty remarks of little more value or interest to a group of intelligent children, which are nevertheless to be found in some magnificently illustrated and modern first readers. In the second place, the reading of directions is valuable because it demands clear imaging in order that the work may be done. It has just the value which it claimed for the well-known "Action Sentences," with the added virtue that this thing needs to be done. It is a part of a reasonable plan which the child has in mind.

This particular subject offers abundant material for reading and of a nature particularly suitable for little children. In any subject in which the same process is repeated many times, or where one phenomenon is seen again and again, or where a means of classification is used frequently, the very repetition of the acts themselves causes a repetition of statement, hence a small vocabulary of often recurring words. If the repetition of words necessary in the beginnings of reading may be brought about by the recurrence of a result seen from a new standpoint each time, the drill becomes of great value.

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[3] The corners were fastened by passe-partout paper, which may be gotten at any picture-framing establishment.

The foregoing lessons have been reported in some detail only with the hope of illustrating some principles which seem important as underlying method, namely, that children shall work upon a subject of genuine interest to them; that this subject shall have permanent value as educative material; that each child shall have an opportunity to work independently; that the problems of reading, writing, and number shall arise from the actual needs of the work; and that this subject shall in some way serve to make this group of children more closely in touch with some other group in the school community.

REFERENCES: Crosby, *Common Minerals and Rocks, Tables for the Determination of Common Minerals;* Dana, *Minerals and How to Know Them, Manual of Mineralogy, Crystallogy, Corals and Coral Islands;* Davis, *Physical Geography,* pp. 99–105, 224–30; Heilprin, *The Earth and its Story;* Geikie, *Text-Book of Geology;* Jackman, *Nature Study,* pp. 71, 97, 133, 176, 219, 257, 301, 341, 390, 436; Ruskin, *Ethics of the Dust;* Seeley, *The Story of the Earth;* Shaler, *First Book in Geology;* Scott, *An Introduction to Geology;* Tarr, *Text-Book of Geology.*

Stories for children: Flora J. Cooke, "The Story of the Pudding Stone" and "Sisyphus," from *Nature Myths and Stories for Little Children;* "The Donkey and the Salt," Æsop's *Fables;* Frank Dempster Sherman, "Wizard Frost."

GARDEN WORK IN THE FIFTH GRADE OF THE UNIVERSITY ELEMENTARY SCHOOL.

MARY M. STEAGALL.

In the spring the garden became the center of organization of the science work. The feeling that the sap was again rising in the veins of all nature gave rise to an innate longing to help nature into activity and beauty again, the desire to plant seeds and to watch their growth.

In early April the garden plot was surveyed by the seventh-grade children. The portion allotted to the fifth grade was a rectangle fifty feet east and west by fifteen north and south. With tape and rule the children verified the measurements of the seventh grade and began to plan the work. Many problems confronted them. As it was still too cool to begin the outdoor work, they devoted themselves to solving some of them in the laboratory.

The garden was selected on an untried area. Was the soil rich, or would it need fertilizing? Of what was it composed? The first question was practically answered by taking some of the soil into the house and testing the growth of plants in it with the growth of similar plants in rich and in poor soils.

The children did not know what made the soil rich or poor, did not know the soil constituents. They could see the stones, gravel, and sand. They were anxious to test it for carbonate of lime, but did not know how it was made nor what the real body of it was. They suggested a coarse sieve for the pebbles and stones, and a finer one for the gravelly sand. They could see the sand that would pass through their fine sieve, but did not know how to separate it from the "dirt," as they called the clay.

They decided to take a kilogram of soil and separate it into as many parts as possible, and find the part that each made of the whole. This amount furnished groups of two or three with about 200 grams each with which to work. After separating the stones and gravel, they boiled the remainder about twenty minutes; then by a gentle stream of water floated away the clay leaving the sand. The water in which the clay floated was kept, allowed to settle, and drained. The parts dried were put together and weighed. The weights furnished practice in comparison of numbers. The process gave individual work, but at the same time furnished one result so that class work might be done in the calculation.

The attempt to grow plants in these constituents taken separately, and to compare the results, failed through lack of that continual vigilance necessary to success in all experimental work.

The garden itself was then planned on paper. A plat of it was made to a scale one-eighth inch to the foot. Each child was allowed to plan the walks and the planting according to his best judgment, and from these was to be selected an approved plan. This involved both an ethical and a practical question. Utility required a walk all around the plat. Two groups of children necessitated equal divisions with similar conditions of light, soil, etc. The ethical required that the part should be planned in reference to the whole. The shade was on the east and south, but more particularly from the east. To divide it from west to east would give almost equal physical conditions, but separate the whole into two long narrow portions, and so sacrifice the pleasing shape. To divide it north and south would give beauty of form at the expense of equal conditions of sunlight. The children chose to subordinate their desire for equal rights to the pleasing whole. This proved, too, a real sacrifice to one group, as the western portion far excelled the eastern in rapidity of growth and rankness of production.

Further divisions must depend on the seeds planted. What to plant was determined by two conditions: the season and length of time during which we might have access to the garden, and the interest of the children in geography and history. The seasons were to be spring and fall. So for the spring harvest lettuce, radishes, and onions were chosen. Their interest in the Puritan Thanksgiving led them to choose corn and pumpkins for fall harvesting. They wished to plant cotton, tobacco, and rice, but the time was too short for these.

The kind of seeds then conditioned the garden arrangement. There was a desire for individual ownership and individual responsibility in each group, yet twenty-five or thirty separate portions would spoil the beauty of the whole. Here the ethical conflicted with the principle of individual ownership, and a happy agreement was reached in which the center was chosen (Fig. 1, *a*) for corn and pumpkins, leaving a one and one-half foot border for the earlier crop. The latter could lend itself to individual ownership and responsibility by merely stretching strings for boundaries.

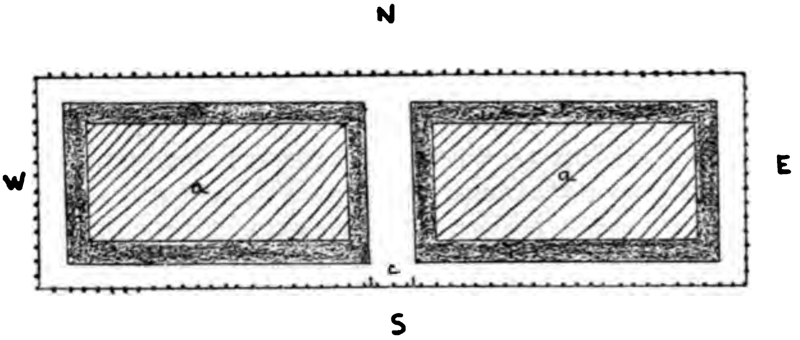


FIG. 1.

The actual measurement and division of the garden furnished the basis for a study of square measurement which was followed up in the Arithmetic work.

The staking off of a two-foot walk around the whole was an easy problem. The separation of the remainder into two equal parts by a three-foot walk was not difficult. The border was easily staked off, but the separation of this into equal portions for individual work was difficult. It was a long while before the children discovered that they must not count the corners twice.

When they knew what they were to plant, the conditions for germination and growth furnished the next problems. They began to think by this time that their soil was good. The amount of water necessary was not made the subject of a quantitative experiment, but by watering the window plants from day to day they learned to tell by the look of plant and soil when more moisture was needed.

That moisture was required for germination was not questioned, but how it made its way into the seed was an interesting problem. They worked this out by covering with paraffin the various parts of the seed and soaking to see what covering prevented the water's getting in.

The amount of sunlight and its effect were studied by planting two window boxes with like seeds under similar conditions, except that one box was kept in a north and the other in a south window. These were carefully watched, the difference in temperature of the two taken, and notes made from day to day of the differences in time of germination and growth. Colored sketches were made to show differences in color at sprouting, and again after exposure to light for about seven days.

Next the children investigated the depth at which the seeds should be planted. They first put the seeds into flower-pots, but such poor results were obtained, because of the unequal conditions in various cases, that window boxes were thought better. A part of manual-training time was given to making three or four boxes large enough to just fit the ledge, and deep enough to allow a four-inch planting. In these, seeds were planted at depths of one, two, three, and four inches. Careful notes were made of the depths, of the seeds which first germinated, and of those which had the better hold in the soil after growth began. They noted, too, that seeds planted an inch below the surface are likely before germination to become exposed on account of winds or beating rains.

The strength of the seedling for making its way out of the soil was questioned in some of the greater depths; so, to get an idea of its strength, we took a jar half full of peas and put them under germinating conditions. After a week they were found to fill the jar, pressing so tightly against each other as to make them irregular hexagons instead of spheres. They were packed in so closely that it was impossible to remove them except one at a time, and even then they must be cut to pieces first.

The raking, spading, measuring, and planting gave abundant outdoor exercise for weeks. For this work rakes and spades were provided in the following manner: Good oak lumber was provided in the manual-training room. Round handles were made about a yard long. For the rake (Fig. 2) a piece of lumber 1½ × 1 × 12 inches was taken. A hole was bored through the one-inch way for the inserting of the handle. Spike nails were then driven through the one-half inch way at distances of one inch apart, the middle one going through the handle and fastening it. The spade was made to correspond to Fig. 3. The broad part of this was about 9 × 6½ inches. It was made strong near the handle by a cross-piece 1 × 1 × 6½ inches which was fastened to it by bolts. The handle was given a slope by a diagonal sawing. It was bolted to the broad part, and passed through a groove in the stay to which it was bolted. Rakes so made are quite satisfactory. The spades are serviceable for the lighter work, if one or two iron spades are used in the tougher soil.

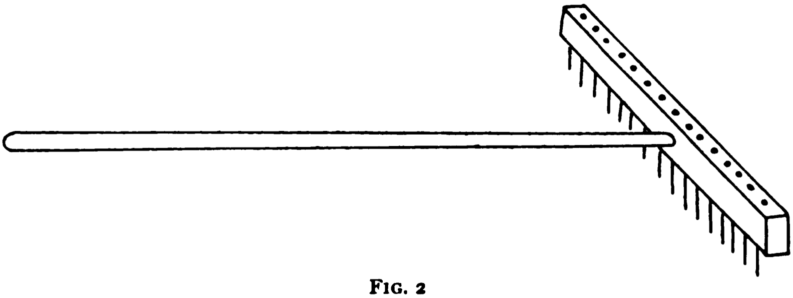


FIG. 2

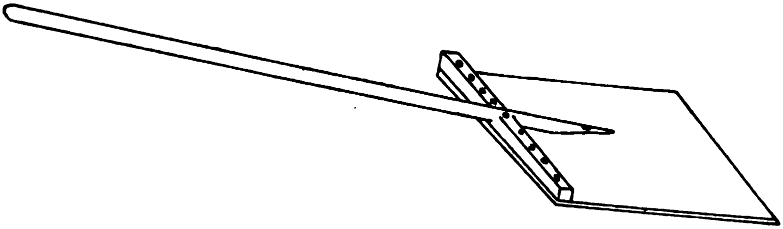


FIG. 3.

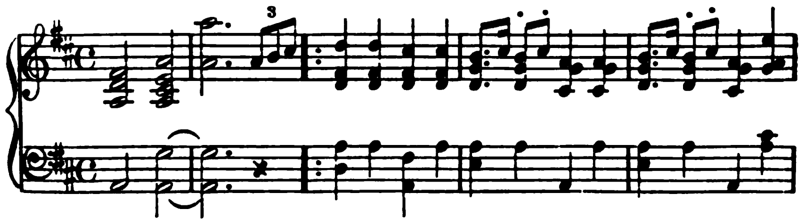
After the seeds had been planted, areas two feet square were staked off on a vacant lot not far away. Here the germination of the weeds of the district was studied. The children discovered how many different kinds grew on the area and made an estimate of the number of each kind. In this way they learned to recognize the form and to know the names of the common weeds of the locality; so when the time for weeding arrived, they knew the weeds that were to be plucked out, and no mistakes were made by pulling up the seedlings.

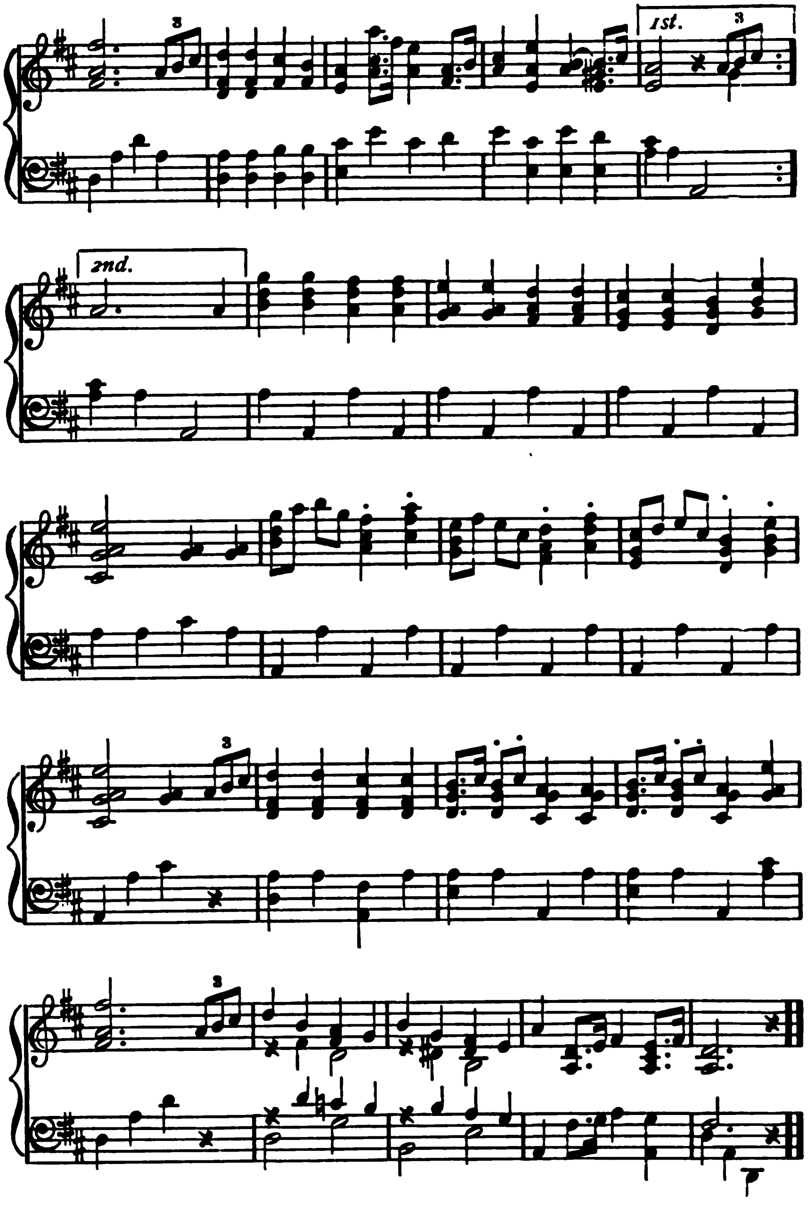
The question arose as to which was better to plant, onion sets or onion seeds. One group planted the seeds, and the other the sets, with the result that the latter harvested its onions this spring, while the former will have a harvest in the autumn.

This account of the meager work in connection with the fifth-grade garden is illustrative of the fundamental importance and far-reaching consequences of intelligent garden work. It is in its nature physical, social, moral, ethical, extensive, and experimental. It is physical in that it gives motor response to the idea and gives the child an opportunity for being out of doors a while each day. It is fundamentally social, as no part of the school work can bring the children into freer and more commonsense relations socially. The garden party to which they invited their parents and friends gave them a chance to realize themselves as a functioning part of the social whole. It is moral in that it develops the ideas of respect for property, ownership, responsibility, and dignifies manual labor. It establishes the fundamental percepts of ethical ideas and in its principles extends to all the subjects of the curriculum. Here may be worked out not alone the fundamental principles of the natural and physical sciences, but it is the basis for mathematics, history, geography, drawing, and literature. Through its inductive experimentation it enlarges the imagery and establishes the basis of logical thinking.

MARCH OF THE LITTLE SANDALS.

MAY ROOT KERN.

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EDITORIAL NOTES.

The Elementary School Teacher

THE ELEMENTARY SCHOOL TEACHER is a lineal descendant of the *Cook County Normal School Envelope*. About the year 1892 a small printing outfit was installed in a basement room of the building occupied by the Cook County Normal School. The purpose of this was mainly to provide printed reading lessons and other material that the teachers desired to use in this form in their class-rooms. The children, stimulated by the desire to express their own ideas, were taught to write from a perfectly legitimate and natural motive. But their reading lessons found in the ordinary text-books bore no such organic relation to their thinking. The printing-press was therefore called into use with a view to placing in the hands of the pupils printed copies of their own stories which grew directly out of their observations. Still further, it gave the teachers opportunity to adapt stories and other descriptions to any particular subject in hand, and thus to relate reading much closer to the pupil's thinking than it was possible to do with text-books alone. The teachers also made use of the press in the preparation of outlines which gave a forecast of their plans for teaching; they used it, too, in summarizing what had already been done. As a stimulus and a means to study, this work was invaluable to the teacher and to the school as a whole.

Presently there grew up a considerable demand for these papers from teachers in different parts of the country. No attempt was made to bind the leaflets, or to arrange them in any particular order; they were simply put up in a large envelope each month, and sent to those who asked for them. The work was continued in this way until June, 1899, when Colonel Parker left the Normal School. These leaflets, which form several volumes of considerable size (no longer to be obtained), give an interesting insight into the workings of the school during that period.

When the Chicago Institute opened in 1900, the publication was resumed under the name of the *Course of Study*. In general, the same plan was pursued, but under the editorship of Mrs. Marion Foster Washburne the matter was given coherent arrangement, and each month the work was bound in magazine form. For two years this plan was followed, there being published in this period two volumes of about nine hundred pages each, which give a detailed view of the school at work.

In 1902, when the Elementary School of the Chicago Institute and the Laboratory School were united, the name of the publication was changed to its present form, and its character was considerably modified. Contributions from teachers and others not connected with the school were received, and the plan of printing outlines and lessons in detail was largely abandoned.

Once more the editorship has changed hands. Those who have assumed the duties feel deeply the responsibilities of the position, and they are planning to leave nothing undone that will enhance the value of the journal to those who are interested in educational problems. The aim will be to combine, as far as practicable, the best features of both plans that have been pursued heretofore. The University Elementary School is, frankly, an experimental school, in the best sense. It is difficult to conceive of a good school being anything else. When, therefore, the teachers of this school develop some piece of work with their pupils that seems to possess merit, it is proposed to give others the benefit of it, as far as possible, in the pages of this journal. The matter so presented will vary greatly in form, because it will come from those who have different points of view; it will never be offered as a piece of perfection, nor as a model to be copied, but rather as a suggestion which will enable another to do something better. No one need wait for perfection, but everybody has a right to expect growth; and it is the latter that the ELEMENTARY SCHOOL TEACHER will seek to encourage. It will therefore be ready to present to its readers the work of all teachers that has been done in a true student spirit and with a view to making the lives of children better.

The journal continues the work, already so well begun by those who have founded and maintained it, with strong assurances of the cordial co-operation of the teachers of the School of Education, of The Francis W. Parker School, and of many others throughout the country. With such support it is believed that the ELEMENTARY SCHOOL TEACHER will continue to be an influential factor in the educational movement of its time.

Dedication of The School of Education

THE most important event in the history of the School of Education since its founding was the dedication of its buildings, on the thirteenth and fourteenth of last May. The University of Chicago made this event the occasion for inaugurating a regular annual conference on topics relating to elementary education, which corresponds to the conference on secondary work that is held in the autumn. The program covered two days, and it included departmental conferences on "The Training of Teachers," "The Arts, Music, and Dramatic Art," "History and English," "Science, Geography, and Mathematics," and "The Library and Museum." There were also two general meetings; one of these was devoted to the subject of "Manual Training," and the other one to the formal dedicatory exercises of Emmons Blaine Hall. The conferences were all largely attended and the papers and addresses were of such exceptional character that the ELEMENTARY SCHOOL TEACHER will publish a number of them during the year. The addresses by Dr. Nicholas Murray Butler, Mrs. Emmons Blaine, and Dr. Ernest F. Fenollosa appear in this issue.

Constructive Work.

IN manual training of all kinds, as with all other school work, the most important point for the teacher to consider is the motive. Constructive work at present, generally speaking, bears about the same relation to hand-work of the highest educative value that the old-time object-lessons bore to true nature-study. Object-lessons were introduced for the purpose of awakening and training the senses that slumbered and slept through the book régime of the schools. It was supposed, at first, that almost any object would serve the purpose. Later it was discovered that any attempt at sense-training which does not take into account the whole mind is vanity; it was further found out that the first demand of the mind is for motive. Without a clearly defined and thoroughly understood motive, it always refuses to give its best. And this is as true for the little child as it is for the adult.

Manual training came into the schools as an attempt to resuscitate and train the motor activities of the pupils that were all but atrophied through lack of use. The pupils were set to cutting and carving on the theory that any kind of movement would serve. But teachers are learning that one muscular movement directed toward a worthy end that is thoroughly appreciated is worth a thousand of the same kind that have no soul behind them. That is, that physical training, the development of the motor activities, is as much a matter of mind as it is of body. It is a matter of both, one and inseparable. And, again, the first demand of the mind is for motive.

The purpose must be direct. In using a saw on a piece of timber the end is not to grow muscle, nor is it to develop character: *it is to cut wood.* If, when cut, it serves no purpose that is thoroughly appreciated, then the educative value of the work is of low grade. Nobody but a sick man or a child under compulsion ever goes through bodily motions, *simply* for the purpose of building up his body; just as nobody but a moral degenerate would go about hunting for opportunities to be honest simply for the purpose of developing in himself a fine moral character. Agassiz did not study because he desired to develop himself mentally, but because he wanted to know more about fishes. Newton did not sit up nights simply to acquire mathematical skill, but to find out something about the heavenly bodies. To fix the attention of the pupil upon himself, by setting up the motive of self-development or skill, is to train in him an insufferable egotism as certainly as though we perpetually praised his neckties and his curls.

The true end, the end which alone can inspire to healthy action, is to be found only in the purpose which the object can serve when it is completed. The object should be worth something because it can do something that somebody would like to have done. Apply this test, and it will rule out much of the handwork that now exists merely because it is fantastic and novel. Train the pupil to apply this test to his work and then do not worry about the development of his motor activities or his moral character. W. S. J.

Summer Schools for Teachers

There is no better place for feeling the educational pulse of the country than at one of its great summer schools for teachers. Here people are gathered from California to Maine, and when classes permit of free discussion the school becomes a kind of clearing-house for opinion, and it is remarkable to note the general trend in the same direction.

One thing that strikes the observer with wonder and admiration is the mere fact that this class of workers whose toil draws so heavily upon vitality should still find strength left for vacation work. It testifies to two things: first, to the vital hold which members of the teaching profession have upon their problems; second, to the pressing nature of these problems themselves. The question has been asked repeatedly of teachers: "Are you not trying to do too much in vacation?" Again and again the same answer comes: "Oh no! It rests me to study. It is so different from teaching, and it is such a satisfaction to feel that one is getting that which will make all next year's teaching better and easier." Surely such an attitude augurs well for the schools represented in our numerous summer sessions that normal schools, colleges, and universities have been conducting. Nowhere is this activity more evident than among the teachers of the South. Energy, enthusiasm, and elasticity mark the southern student.

The trend toward activities which involve positive contact with things and processes is a sign of the times. Those studies which demand laboratory methods, or constructive, or executive power, are in the lead. This may seem at first thought to be a passing fashion, but a closer following of classes convinces one that the selection has been made under conviction born of actual experience of the needs of children. One young woman from a southwestern state said: "Well, no one from our town was doing anything definite to find out about these modern methods, and I just determined I would; for certainly our schools do need something down there. And now that I have come I know better what I want and what we need." It may be added that, as a result of the energy of this teacher and the generosity of a member of the school board of her town, materials have been provided that will greatly increase the facilities of their primary work; a first-grade room has been furnished with chairs and tables in place of the solitary desks, so that the children, barely beyond kindergarten age, may have group work and games. As an evidence that this teacher was not standing alone in this desire for progress, we cannot forbear to add that her school board paid her tuition at the summer school. Who knows how many such histories may lie behind the great wave of educational reform?

B. P.

BOOK REVIEWS.

Hull's Elements of Algebra for Beginners. By GEORGE W. HULL. New York, Cincinnati, and Chicago: American Book Co., 1904. Pp. 159. $0.50.

A GOOD book, though we see no reason why it should have been written, as the market is full of just as good. In our judgment, the giving of rules before processes and of definitions before the thing to be defined or the process under the rule is thoroughly understood, is faulty.

The author says in his preface: "We have made the equation the most prominent idea of each chapter." And yet, nearly 75 per cent. of the equations in the book are given for solution. It would seem that if the equation is so important (and it is), the originating of it is far more important than its solution. The child has simply to recall certain facts already learned by rote to work an equation made for him. On the other hand, if he be given the conditions, let them be ever so simple, he has not only to recall the facts as before; he has also to draw an inference and through this inference form his own equation, which becomes a part of himself, thus enhancing its value and causing its solution to be far more pleasurable. This, however, is a fault found in many elementary algebras. The author has simply followed the beaten path.

WILLIAM M. GIFFIN.

Educational Music Course. Teachers' Edition for Elementary Grades. By JAMES M. McLAUGHLIN AND W. W. GILCHRIST. Boston: Ginn & Co. Pp. 271. $1.25.

THIS book is a teacher's manual designed to supplement the *New First Reader of the Educational Music Course* by furnishing excellent piano accompaniments for the melodies given in the pupil's *Reader*. That harmony greatly enhances the value of songs is undeniable, and where a piano is even occasionally available, it should be employed. In all school assembly-rooms a piano will be found, and, in default of the schoolroom piano, this should be used as often as practicable for the sake of the ear-training which the presence of good harmony affords. This book contains a collection of good rote-songs for elementary grades, together with practical drills for developing the child's voice; also, in connection with songs for sight-reading, carefully graded exercises in time and interval. In an appendix, songs by great writers adapted and arranged for children's use are given. While it is axiomatic that the child should be given "the best," it is a question whether it be wise to discount the future by injuring the great songs written for adults through divorcing them from their virile texts and resetting them to neutral-tinted verses, and, furthermore, pruning them, or cutting out those integral portions which furnish a contrast and background for the simpler melodic gem.

M. R. KERN.

Schücking's Die drei Freier. Edited by OTTO HELLER. Boston: Ginn & Co. Pp. xxiii + 81. $0.30.

THIS is the first time this thrilling story has been printed out of Germany, and the first time it has been edited. The copious notes deal for the most part with moot points and other difficulties of German grammar, while the archaisms of Schücking's style are separately considered in a chapter of the Introduction. *Die drei Freier* is adapted to the needs of students who have spent about one year and a half on their German, and will be found to furnish excellent sight-reading for more advanced students.

Elementary German for Sight Translation. By RICHARD CLYDE FORD. Boston: Ginn & Co. Pp. 43. $0.25.

THIS is a text planned for the first two years of high-school and college work, to be used as soon as classes are able to take up easy reading. Although the text has been prepared primarily for sight translation, nevertheless a few brief footnotes have been introduced, thus making it especially helpful to those who may wish to use it as a supplementary text in prepared reading and conversation. The spelling followed throughout is the latest official orthography (decree 1902), and a few of the exercises are printed in Roman in order to familiarize the reader with both styles of German printing.

Baldwin's Spelling by Grades. New York, Cincinnati, and Chicago: American Book Co. Pp. 128. $0.20.

CONTAINS the words used in the well-known series of Baldwin's readers, arranged in the order of their occurrence. The gradation and arrangement of the book, however, are such as to adapt it for practical use in all elementary schools, without regard to the series of readers. The words are arranged in numbered groups, each group being sufficient for a single lesson. Words of special difficulty, as well as most of the proper names, are pronounced in review lists. The meanings of all proper names and of the difficult or uncommon words are given. These definitions, and the marking of pronunciation, are especially thorough and satisfactory.

Dumas' Les trois mousquetaires. Edited by C. FONTAINE, New York, Cincinnati, and Chicago: American Book Co. Pp. 208. $0.60.

THE adventures of Athos, Porthos, Aramis, and D'Artagnan, which have delighted so many thousands of older readers, are here presented in suitable form for class reading. The editor has skilfully abridged the lengthy novel, but has left the thread of the story unbroken, so that this brilliant work of Dumas may prove interesting and useful to both teachers and pupils. The omitted parts are summarized in brief English synopses, so that the reader will be able to follow the plot throughout. Notes are added to afford all needed help, and the vocabulary is complete.

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MODERN BUSINESS METHODS

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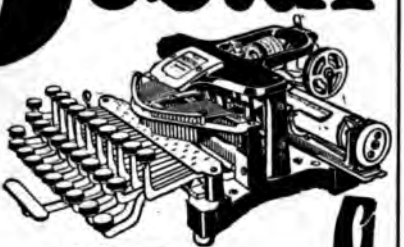

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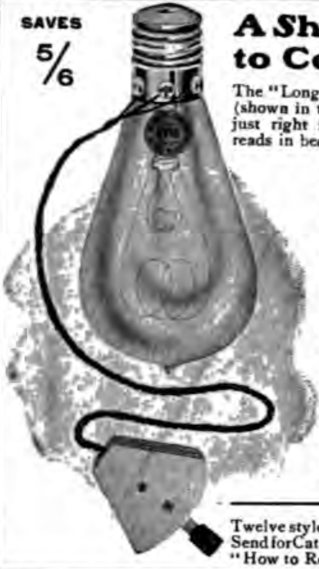

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CONTENTS FOR OCTOBER, 1904

ANNUAL REPORT OF THE HOME COMMITTEE OF THE PARENTS' ASSOCIATION OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO MRS. CHARLES F. HARDING 65

THE PLACE OF TECHNIQUE IN ELEMENTARY MANUAL TRAINING FRANK M. LEAVITT 72

MANUAL TRAINING AND MANUAL LABOR - - - - - WILLARD C. GORE 77

MANUAL TRAINING IN PRIMARY GRADES - - - - - ANNETTE BUTLER 82

ART - - - - - - - - - - - - - - - - - - CHARLES ZUEBLIN 85

THE APPLICATION OF ART TO HAND-WORK - RALPH RADCLIFFE WHITEHEAD 92

SCIENCE IN THE FRANCIS W. PARKER SCHOOL - - - - WILLARD S. BASS 97

FALL PLANTING - - - - - - - - - - - - - WILBUR S. JACKMAN 114

MUSIC - - - - - - - - - - - - - - - - - MRS. CROSBY ADAMS 118
Pebble Game; Forming the Circle; A Riddle.

EDITORIAL NOTES - - - - - - - - - - - WILBUR S. JACKMAN 122
The Unused Energy of Boys and Girls; What Some Boys and Girls Can Do; What Inducements Can the Schools Offer? Two Freshmen; What These Examples Mean; True Education Includes the Idea and the Fact of Self-support; Enforced Tasks and Enforced Idleness; Parents' Associations.

BOOK NOTICES:
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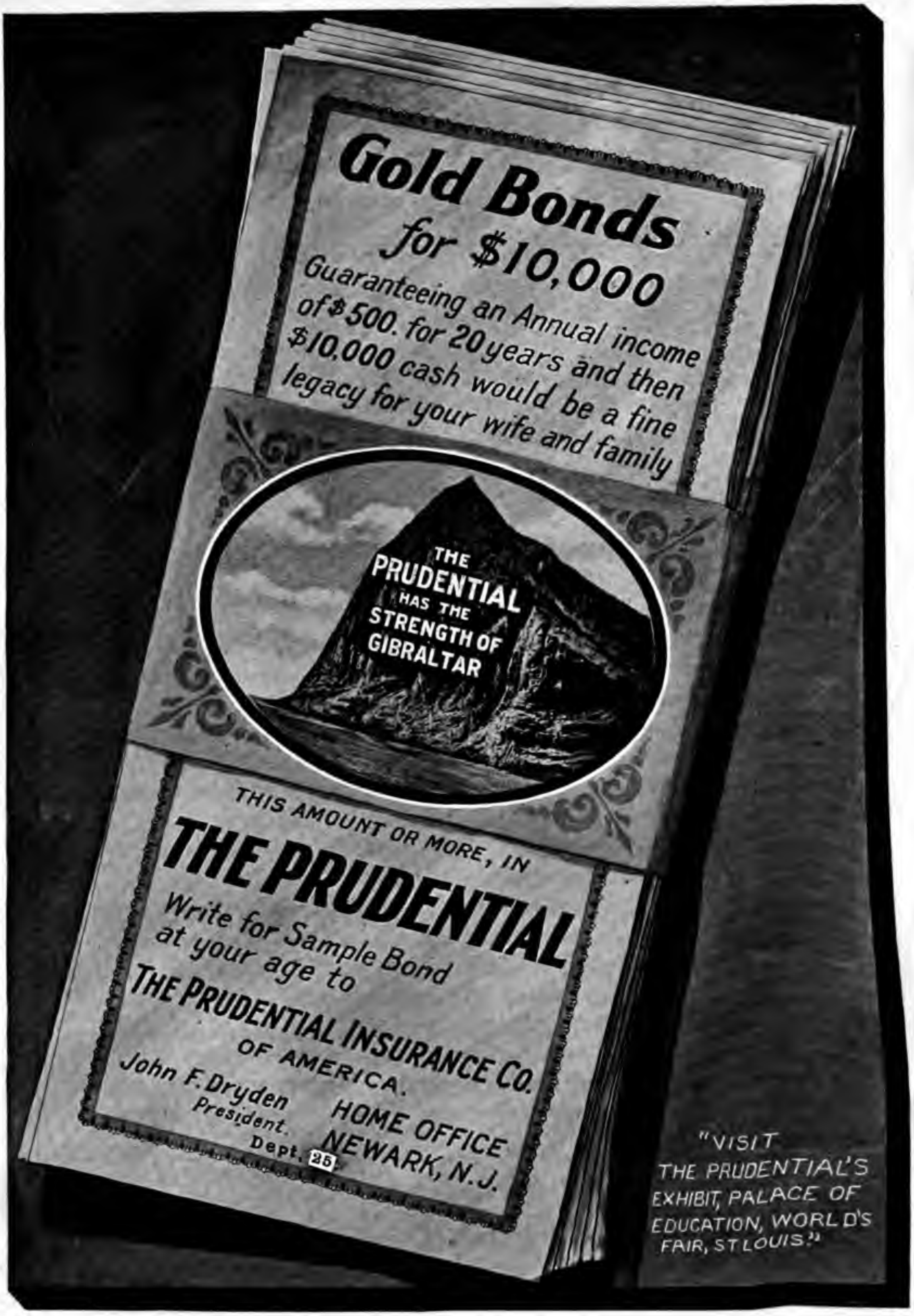

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THE ELEMENTARY SCHOOL TEACHER

OCTOBER, 1904

ANNUAL REPORT OF THE HOME COMMITTEE OF THE PARENTS' ASSOCIATION OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO.[1]

MRS. CHARLES F. HARDING,
CHAIRMAN.

THE Home Committee of the Parents' Association of the School of Education grew out of the Social Committee formed some years ago in the Laboratory School. That Social Committee met and discussed the social and physical needs of the boys and girls, and at the same time strove to bring all of the mothers to an understanding of what the school stood for socially. Among other things, we agreed that a democratic spirit should prevail; that no sex line should be recognized; that the girls should be simply dressed; that there should be no idle roaming about the streets or idle visiting; that the social gatherings should be most simple. For the younger children we encouraged sleigh rides, picnics, and afternoon parties. For the older ones, we stood for early hours and plain dressing. And always we discouraged too frequent festivities of any sort. The teachers as well as the parents came to realize that social events were important. But something else was needed to make the social life more wholesome, natural, and developing. This should come through intercourse centered about common interests. So camera clubs, debating clubs, and sketching clubs were some of the clubs formed. We arranged with a young university man who had the true spirit of play to encourage plenty of activity of the right sort among the boys during noon time and for a time after school. We arranged with the young woman director of the gymnasium to initiate the girls into games out of school. The teachers met with us. Without their counsel and co-operation we could have accomplished but little. Each member of the committee acted as chairman of another committee and called that committee together to spread the principles for which the main committee stood. These committees met informally at the homes of the members. In this way the parents became acquainted with each other. They came to know the needs of their friends, and, I think, were of mutual assistance. In this way the school was brought into the closest touch with all the families represented in it, and furnished a unique instance of the whole neighborhood being a part of it, so that this community was associated with the methods, aims, and ambitions of the school in a way that made it an uplifting force, not only to its pupils, but to a large constituency. The subjects discussed in this committee were "Proper Recreation for Children," "Need of Public Playgrounds," "Value of Neighborhood Director of Games," "Out-of-Door Life in Cities," "Athletics," "How Shall the Time of the Child Out of School be Occupied?" "Physical Care of Children," "Periods of Growth," "Social Needs during Adolescence."

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[1] A part of this report is taken from the author's "Social Needs of Children," published in the ELEMENTARY SCHOOL TEACHER for December, 1903.

✓ The committee was strenuous in its efforts to infuse into the little community which grew about this school simplicity in thought and in action, and I think we were all rewarded by seeing our boys and girls reach the ages of sixteen and seventeen natural and wholesome. But we did not have our own children only in mind. We hoped that the learning of a university—that rare pedagogical insight, combined with the earnest watchfulness and experience of the teachers and parents—might throw light upon what the social life of children of all communities, and especially of less favored communities, should be.

But the Laboratory School was small. Such a committee might or might not succeed in a larger school. The opportunity to test this came last fall when the four smaller schools were merged into a larger school—the School of Education. A parents' association was formed, and the Home Committee was one of the committees provided for in the constitution.

By some inadvertence the constitution provided that the Home Committee should be composed of twenty-two members. It should have provided for a membership of twenty-eight; so that a chairman and a secretary might be chosen for the General Committee, and the other twenty-six be disposed of in accordance with the general scheme. There are thirteen divisions in the School, and the general plan was that every parent of the thirteen divisions should in one way or another partake of the work of this committee. To do this, after reducing the twenty-eight members by its chairman and its secretary, there would be twenty-six left — a sufficient number to furnish a chairman and a secretary to an organization made up of the parents of each of the thirteen divisions, and which organizations were to act with, and supplement the work of, the General Committee.

The general meeting of this committee for the purpose of organizing and outlining its work was held in February. The plan was to adapt the organization and work of the Social Committee of the Laboratory School to this larger school in its larger needs. The members showed a keen appreciation of what the committee stood for; *i. e.,* to secure such conditions at home and in the school as would accomplish the wholesome and natural development of the child and youth both physically and socially. The members of this General Committee subsequently called their committees together. As a result the Kindergarten Committee met and decided to meet every two weeks and conduct regular work with the possibility of publishing the results so obtained. The chairman asked for the co-operation of the parents in securing a more simple style of dress for the girls, and also to give the girls more of out-of-door life.

The First, Third, Fifth, Seventh, and Eighth Division Committees all met and held successful meetings. The following subjects were presented and discussed: "Gardening," "Literature for Children," "Reading at Home," "Dramatics," "Coeducation," "Social Life of Children," "Cheating in School," "The Relation Existing between Boys and Girls," "Athletics," "Fraternities," and "A More Simple Social Life." The Fifth Division Committee asked that the School give more time to manual training.

The work of the High School committees was largely done by the First Year Committee. The committee conducted a series of meetings and considered the following subjects: "Athletics," "Fraternities," and "Substitutes for Fraternities." As a result of these meetings the following recommendations were sent to the faculty of the High School:

1. We urge the building at the earliest possible date of a students' clubhouse and the development of genuine club life.

Until this is done we ask for the setting apart of several rooms in the present building for this purpose, and we offer to assist in fitting them up and caring for them properly.

We urge that this club idea be developed in the spirit of a true democracy, with freedom of forming and leaving groups of friends, and under the becoming supervision of the faculty.

2. We urge the constitution and development of many clubs of special interests — debating, literary, musical, art, dancing, outing, etc. We ask that these interests be frequently presented to the students in public assemblies, and their social side made attractive.

We hereby offer to assist in finding money, meeting-places, and chaperones to begin and carry on this work.

3. We offer to conduct many social parties at our houses during the season, and so to co-operate that all students may be so reached. We ask the authorities to regard this as a part of their interest, to advise with us as to the best methods of doing it and of how to make it satisfy social needs of the students.

4. We urge the continuation and development of the afternoon school parties and dances. We rejoice in their simplicity and informality. We suggest the division of their attendance into several groups, so as to throw together those of similar ages and interests.

5. We urge the School not to permit the formation of formal fraternities and societies, because the social good they accomplish is bought at too high a price in waste of time; in social fixation; in the creation of a spirit of exclusiveness and of pride, and the consequent damage to those who are not members; and in the prevention of the freedom of social movement and the love of the School as a whole which is the first need of all young people.

In reply, Dean Owen of the High School said:

I am sure Dr. Belfield and I appreciate the spirit in which the committee has undertaken its work. The faculty voted in its last meeting not to permit further initiation into fraternities. This, I think, will settle this particular question. This very act, however, makes it very important that we should do something really worth while in caring for the social life of our children. I shall try to get something definite to say to you in regard to rooms for social purposes.

I have spoken so far mostly of the past, but I have spoken also of our purposes, and they reach forward into the future as well as backward into the past. If our hopes and aspirations are to be realized, it seems to me that we must give to this work more than a passing interest; that we must all co-operate toward a common end, and that we must use the means at our disposal in the most effective way.

We, the parents of children in a school so richly endowed as this, have a double responsibility. Our responsibility in the first instance, and that of the teachers and officials, is to the children who attend the School. It is to illumine their path; to give them a better idea of the value of things, and a better idea of the relation of things; to elevate their notions of intellectual attainments; and to demonstrate to them what social life should be — to inspire them with the spirit of democracy, and to give them a lasting understanding of their own worth in the world.

Out of this arises our responsibility to the cause of education everywhere; and if we acquit ourselves well, we shall thus blaze the way for the introduction of similar aims and ambitions in our public schools and make it possible for them more fully to serve the end of their being.

It would be easy to show by multiplied examples that the real and actual work of large organizations must be done by committees rather than by the organizations themselves. It would also be easy to prove that all these committees in their work should realize that same democracy which they so earnestly recommend for their children and for the school; and therefore, in concluding this, my report, I recommend for the guidance of future committees that full records be kept of all of their proceedings, and, so far as may be, of the proceedings of the subcommittees, so that material may be at hand for publication whenever deemed best; and I especially recommend an adherence to the following principles:

1. The committee should be as informal as possible, and to that end should hold its meetings at the homes of its several members, where the atmosphere of the home will, by its very presence, suggest ideas not to be evolved from surroundings more formal and severe.

2. The discussion should involve the conditions, surroundings, characteristics, and tendencies of childhood and youth, and should be had with a view to initiating definite action that would better them. This distinctly does not mean the discussion of individual cases. Personalities should be carefully avoided. The committee should never forget that its function is general and not personal, and that its duty is not one of a grievance committee.

3. The committee should bear in mind the need of securing for the child a perfect physical development. This would involve lectures and discussions for the purpose of understanding the physical well-being of the child and the youth, and of securing the proper surroundings and conditions for such. At this point, among other subjects for discussion, would be that of athletics.

4. It should also consider at all times and keep in the foreground the need of proper social activity for the child. It should carefully distinguish between proper social activity and mere restlessness. The child needs leisure as much as work or social life, and this need should not be sacrificed. At the present time the restless social life of the child and youth needs serious consideration. Their training should be such that, in the words of a well-known educator, they could pass Sunday creditably to themselves; but, instead of that, their serenity and self-poise are being sacrificed.

5. Do not be discouraged if the discussions reach no result for the time being. The atmosphere will be clearing. In the end we shall see more clearly, and some good things will crystallize.

And last of all and most important of all, this committee and all the committees, if they are to reach the best results of which they are capable, must have — and I cannot bring myself to doubt they will have — the hearty and sustained co-operation of all the parents, and of all the teachers, and of all the officials, and of the Parents' Association as such.

ORGANIZATION OF THE PARENTS' ASSOCIATION OF THE SCHOOL OF EDUCATION FOR 1904–5.

Mr. Charles A. Heath, 471 Forty-second Street....................*President*
Mr. Joseph W. Errant, 346 East Fifty-fourth Street..*First Vice-President*
Mr. F. W. Smith, 4725 Grand Boulevard............*Second Vice-President*
Mr. James H. Tufts, University of Chicago............*Third Vice-President*
Mrs. Frank Hugh Montgomery, 5548 Woodlawn Avenue..........*Secretary*
Mr. A. V. Booth, Chicago Beach Hotel........................*Treasurer*
Mrs. William Kent, 5112 Kimbark Avenue..*Chairman of Finance Committee*
Mrs. Wilbur S. Jackman, 5724 Kimbark Avenue. *Chairman of Home Committee*
Mrs. Warren McArthur, 4852 Kenwood Avenue. *Chairman of Social Committee*
Mrs. John O'Connor, 5210 Woodlawn Avenue. *Chairman of Educational Committee*

THE PLACE OF TECHNIQUE IN ELEMENTARY MANUAL TRAINING.

FRANK M. LEAVITT,
BOSTON, MASS.

Of all the theories which may engage the attention of the manual-training teacher, I can think of none which will have more influence upon his daily practice in the class-room than will his theory as to the rightful place of technique in the work under his charge. If this be true, our subject is, then, of first importance and its consideration a matter of practical utility.

Someone has said that most discussions would be unnecessary, or even impossible, if those engaged in them would first concern themselves with mere definitions. At the risk of making the remainder of this discussion unnecessary, may I quote from the definitions of "technique" given in the *Century* and *Standard* dictionaries:

> Technique—the method of performance or manipulation in any art, or that peculiar to any artist or school; technical skill or manipulation; manner of artistic performance; the details, collectively considered, of mechanical performance in any art; also mechanical skill in artistic work; used especially of the practical details of any fine art.

If we are to have a suitable basis for discussion, it is evident that we must distinguish at the outset between the "method of performance" and that exactitude in performance which the words "technical skill or manipulation" and "mechanical skill in artistic work" may imply. Let us accept as a basis for discussion the definition first given, "the method of performance or manipulation." For example, one might clamp a plane in the vise in an inverted position and draw or push a piece of wood over it against the plane iron. He might become so skilful in this performance that he could produce a perfectly plane surface on the wood. I think we should agree that he had a faulty "technique," although the performance was one of exactitude or accuracy.

In the light of these prefatory considerations, may I say, unequivocally, that I believe the development of a correct technique to be of prime importance in manual training, considered as an educational scheme.

Technique in any educational scheme, of which the child is to be the product, should be considered simply as a means to an end, not as an end in itself. It is felt by some that the development of accuracy is one of the objects for which instruction in handwork is given, and in so far as this is admitted, technique may, in a sense, become an end rather than a means. In my opinion, however, it has no place as an end in elementary manual training, and it is a fair question whether it does not receive far too much attention, as an end, even in secondary schools. Modern educators are agreed that manual training is peculiarly adapted to accomplish for our children certain general educational ends, and it is only as technique enhances the possibility of this accomplishment that it is worthy our consideration.

What are some of the ends which manual training is thought to further? I would mention the quickening of the creative instinct, the inculcation of a respect for labor, the formation of habits of neatness, order, directness, and exactness, and the induction of the logical and rational thinking and doing of one who believes in cause and effect. Let us ask to what extent technique is useful in the acquirement of any one of these objects, for example the development of the creative faculty, bearing in mind that we have agreed to consider technique not as accuracy, but rather as the method of performance. The creative faculty is developed only by personal achievement. The little child is satisfied with comparatively modest achievement so long as it is continuous and progressive. He is also satisfied with a moderate degree of accuracy — or, shall we say, is not disturbed by a considerable inaccuracy — so long as he achieves something which appeals to him as useful and desirable. Nor is he hurt by such inaccuracy so long as he does not fall below his own present standard, which standard is imposed by the project in hand. In the early days of his acquaintance with the plane he may wish to prepare a piece of wood seven inches wide, for use in the kitchen as a cutting-board. It is very probable that in this early effort he would meet with better success, in planing just to the line, if he were permitted to stoop down and peer under the plane while using it, as we know boys so frequently wish to do. He might thus stop nearer the line, but his shavings would not be so good. His work would be comparatively accurate, but his technique poor. When we reflect, however, that at some future time he may need to produce true surfaces, for glued joints let us say, and will therefore need a better method for the accomplishment of the result which he himself desires, then we realize that this method of using the plane is objectionable. His technique is insufficient. It would seem wiser to have required the boy to use the very best method of handling his plane when engaged in his first planing, and when a slight, or indeed a considerable inaccuracy would not have impaired the usefulness of the product or have discouraged the young worker.

This regard for technique then, this insistence on the employment of the correct method, is important chiefly because it insures the fact that the tools, in the child's hands, shall be tools of ever-increasing efficiency, keeping pace with the enlarging ambitions and advancing standards of the worker and the increasing demands of his problems.

It will be the easier to accede to the demands which this theory makes upon our practice in the class-room, if one is not overanxious for accuracy in results. But this desire for extreme and immediate accuracy is far too common among us. I believe that one of the dangers which beset our work lies in the fact that the facility which it offers for developing accuracy is its most prominent feature; and not only prominent, but alluring. There are many warm advocates of manual training who see in it nothing more than this opportunity to instil a regard for small measurements, square corners, good curves, and a fine finish. Manual-training teachers who believe in the fundamental importance of this feature feel that every method leading to accuracy of results is a good method, and every means of securing it a worthy and legitimate one. It is unfortunate, for the best interests of our children, that the prominence of this feature hides, from the eyes of so many, the fact that the ability to adapt means to ends is of far more importance than mere fussiness; that ingenuity is more useful than a highly specialized ability, at least for young children; and that the joy of creating is a more elevating motive than the desire to imitate the skilful performance of another. We are in little danger of forgetting the importance of accuracy, but we may easily overlook the fact that an unnatural demand for accuracy destroys the spontaneous effort of the child, and robs him of that sense of reality which is peculiar to manual training as contrasted with much of the academic work. It is this very unreality, of necessity characterizing purely academic work that educational manual training was designed to correct.

In an address an intelligent advocate of manual training, a layman, recently said:

> With manual training, however, the immature faculties are not forced out of their normal path; the child is not compelled to lie to you and to himself by pretending to a literary power which he cannot have. One simply employs the natural instinct of the child to use its hands, one merely seizes upon that passion of most children to make something, one but leads into regulated channels the brimming enthusiasm of healthy youth for the bending and shaping of inanimate things.

Is it entirely true that manual-training teachers are never open to the criticism here made, by implication, of the teachers of the humanities? Is it not possible that we sometimes compel a boy to lie to us and to himself by pretending to a mechanical skill which, in the very nature of things, he cannot have? I believe that we should free ourselves from any suspicion of this criticism, and confidently rely on the method commended in the above quotation.

What, then, should be our practice in the class-room regarding the hand-work of our pupils? I sincerely believe that we should view with complacence all "results" so they be the product of the boy stimulated by a vital interest and achieved with the proper tools thoughtfully used. Here, it seems to me, is the specific point at which the teacher has a right to be dogmatic. For the sake of encouraging experimentation and thoughtfulness he may occasionally permit the use of a wrong tool, but he should at all times insist upon the correct handling of the tool, upon correct position and intelligent use; that is to say, a use that has due regard to the form and construction of the tool and the physical limitations of the worker — a reasonable technique.

Equipped with a knowledge of the correct method of handling tools, supplemented by some habitual application of that knowledge, inspired by a vital interest in real work, and opposed by the demands of reasonable problems, we may feel sure that the pupil will gain, along with the major benefits of manual training — as, joy in creation, respect for labor, habits of order, directness, and rational thinking and doing — the relatively unimportant acquisition of a mechanical precision in his hand-work.

Technique will then hold a chief place in our regard, because it will furnish our pupils with power to manipulate the tools and materials with which manual training deals — a power commensurate with the reasonable demands of the immediate project; and we may be confident that when the demand for accuracy is a timely one, it, like all others, will be adequately met.

MANUAL TRAINING AND MANUAL LABOR.

WILLARD C. GORE,
THE UNIVERSITY OF CHICAGO.

THE march of manual training in the educational world is rivaled by the retreat of manual labor in the industrial world. At first glance the general situation seems to be something of an anomaly. The tremendous development of machinery and applied science in the industrial world has crowded in between the brain and the hand, feeding on both, assimilating both into the complex automatism of its own growing structure, till the hand-labor that is left, to say nothing of the brain-labor, seems hardly more than a temporary makeshift, awaiting a few more new inventions to put it, not painlessly perhaps, out of the way. And now comes the exploitation in the schools of the very form of activity which is fast becoming obsolete in industrial life; and with this exploitation of a survival there arises, curiously enough, or rather just as we should have expected, in analogy with many other social survivals, an entirely new attitude toward hand-work. It comes to have an æsthetic value it did not enjoy before. The original activity became drudgery or worse. The survival is a thing of beauty.

An anomaly, or a paradox, is of value because it forces conceptions to a deeper level. Is there a tendency to confuse manual training with manual labor — with the handling of tools and materials to secure merely tangible results? Is the child to work with his hands, and with the knife, saw, and hammer, after the manner of an adult laborer or unskilled artisan, in response to the dictates of a model, or sequence of models? Is it argued that the child's moral nature, his habit of truthfulness, is being developed by this process, because of the fact, forsooth, that he cannot very well lie out of any discrepancy between the model and his own copy? If so, then the present era in manual training corresponds, all too closely, to the great era of "fancy-work," with all its unfanciful hideousness and triviality; an era which followed the rapid development of machinery for spinning and weaving, culminating in the invention of the sewing-machine, and which in its unhappy fashion exemplified the law of the æsthetic survival of a formerly useful occupation.

I have seen some outputs of manual training which educationally were, so far as I could make out, pretty much on a par with the crocheting of tidies, with "drawn-work," or with the embroidery of doilies and lambrequins. I do not mean to speak disrespectfully of the educational value of such modes of expression. For some individuals it is doubtless very great. Nor would I confuse the placing of a little stitch at regular intervals along the line of a shop-stamped pattern with true constructive and artistic work in textiles. The point I wish to make is, after all, the point that has been made so many times that one is in doubt as to how much longer it will be proper to bring it up; namely, that the educational value of any form of activity depends, not on the stuff used, but on the attitude of the user. Do manual training and "fancy-work" amount to the same thing educationally? They do, I repeat, if the attitude of the worker in each is practically the same. And I submit that it is practically the same when the worker in wood or in iron, as the worker in worsted, in silk, or in linen, follows, though patiently, the line of a stamped pattern whatever it be called.

Thus we come back to our anomaly, in so far as educationally we find ourselves repeating, under the guise of manual training a form of activity which the larger social and industrial situation is trying to eliminate and tolerates only as a temporary makeshift.

So far we have been looking only at one side of the æsthetic value which a social survival may have. We have been discussing, by implication at least, the more narrow, trivial, and anomalous directions into which the æsthetic interest may lead, Everyone has probably experienced the kind of æsthetic gratification one has in doing over again, under very different conditions, something that was originally distasteful, or in living over again in the imagination something that in the first place was a hardship. One's dire failure can sometimes be recounted with great satisfaction in the presence of later successes. This may be the lowest form of æsthetic gratification, being pretty much a sheer repetition of a previous experience. There is little appearance of growth in the repetition, in the recount. The prosperous individual who is forever sunning himself in the reminiscences of his early toil and struggle is a type that leans toward the side of complacency rather than toward the side of further development of the spirit. Still there is more of positive value in this form of æsthetic gratification than we have charged to its credit. On the very face of it, it is something more than a reinstatement of a previous experience. The event has been taken out of its original setting and placed in a new one. Hence, the charm it did not have before.

And here we come to a parting of the ways. In one direction lies the blind alley of mere repetition of the act for the sake of continually realizing upon its charm. In the other direction lies the open road of further question and endeavor, of larger possibilities, toward which the æsthetic appreciation may be an impelling stimulus. Surely the quickened interest in arts and crafts, the newer æsthetic appreciation of things that are "hand-made" may have more in it than that form of æsthetic gratification which arises through the mere repetition of manual labor in the new setting of machine-made things. If it has not, then it deserves to stand condemned as a "fad" and a "frill."

It is a matter of comparative indifference as to whether the arbiters of taste will continue to fill their houses with "hand-made" furniture, "hand-made" books, and "hand-made" bric-a-brac. It is a matter radically different as to whether this new-found appreciation of manual work which has come into education, this new æsthetic attitude which is upon the whole the most revolutionary factor in modern education, shall be allowed to crystallize into a sentimental form of manual labor, or whether it shall be generalized into a group of constructive activities which shall constitute a fundamental part of the curriculum. It is not a question of determining the place of constructive activities. It is a question of how far at any given time these activities are ***recognized*** and ***utilized*** as educational means and opportunities.

In the industrial world what would probably be regarded as the two most serious factors in the "labor problem" are the isolation of labor, particularly of unskilled labor, on the one side, and the irresponsibility of intellectual control, on the other. Specialists in nerve diseases tell us that one of the most characteristic symptoms of that form of mental derangement known as hysteria is some phase of anæsthesia, or the lack of feeling, the lack of sensitiveness, in some part of one or more of the sense-organs, usually touch and vision. One writer[1] significantly terms this anæsthesia of hysteria "chronic absent-mindedness," or a "contraction of the field of consciousness." There is evidence for believing that this partial loss of feeling, of sensitiveness, is due, not to the impairment or actual destruction of any portion of the sense-organ itself, but to the isolation, the dissociation, of the inner nerve connections. The point may be given an application in terms of social psychology. If there be any violence and working at cross-purposes in the present industrial world which can be fitly compared to the violence—the "accidents," as they are sometimes called—of a hysterical patient, the analogy would lead one to look for corresponding symptoms of social anæsthesia, of lack of feeling, lack of sensitiveness, equivalent to "chronic absent-mindedness," to a "contraction of the field of consciousness," on the part of those concerned, employer and employed. And it would lead one to see in these symptoms, when found, in this lack of "touch" and "vision," not the impairment or actual destruction of any portion of the sense-organs of social consciousness, but the isolation, the dissociation, of inner nerve connections; for example, in the failure of manual work to be done in terms of free intelligence, as an expression of personality, and in the co-ordinate stultification of intellectual control in its own irresponsible exercise.

Is the manual training situation to be chiefly a reflection of a pathological and hysterical social condition? Is it to be an æsthetic survival of the gulf between manual labor and the operations of intelligence? Sufficiently current, probably, is the belief that the utilization of motor activity in getting things made is likely, in the case of children and youth, to be of educational value. But why should it be of educational value in the case of children and youth any more than in the case of adults, unless it be the occasion of bringing into play, also, the ideas, the intelligence, the "inner nerve connections," the "touch," and the "vision" of the individual worker? It is surely the freeing of these that transforms manual labor into manual training.

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[1] PIERRE JANET, *The Mental State of Hystericals;* translated by CAROLINE R. CORSON.

MANUAL TRAINING IN PRIMARY GRADES.

ANNETTE BUTLER,
THE UNIVERSITY OF CHICAGO SCHOOL OF EDUCATION.

ONE may enter the University of Chicago at the age of three, and at this time his work in manual training begins.

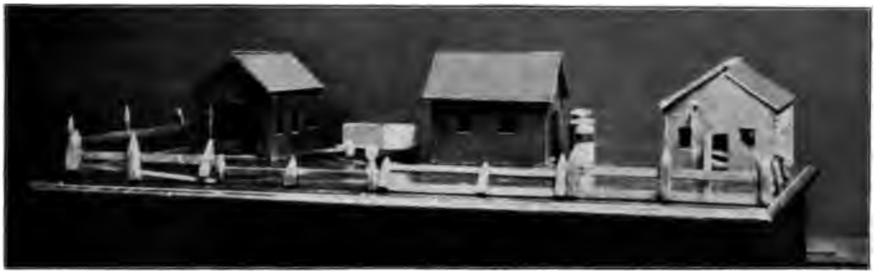
The kindergarten during the past year has furnished its doll-house with tables, chairs, beds, and cupboards. Saws, hammers and nails, with small blocks and pieces of wood, were used, and many small busy hands, with absorbed interest on the part of the diminutive owners, were the means by which the furnishing was accomplished. In the springtime stakes were made for their gardens; "the most satisfactory stakes ever used" being the verdict of their teacher.

In the first grade the underlying thought of last year's work was food supplies and the industries pertaining thereto. In October a farm was planned. The children decided upon a house and barn, a milk-house and a corn-crib, to be made of wood. In time fences were added, and two wagons, bridges for the stream, and some improvements upon the house and barn. At the conclusion of the first lesson in planning the farm, one very small boy added nonchalently: "And don't you think it would be rather nice to lay out a little golf ground?" The dimensions of the farm were determined by the size of the available sand-table, and the buildings were made to scale. It was distinctly a community project, each one having his part to do. Seven children made the seven pieces of the house, each one drawing on a paper, with ruler, the pattern of the piece he was to make, to exact size, and from that pattern making the same piece in wood, using quarter-inch bass. Each child had the privilege of nailing his piece to the part that came next, and in this manner the buildings were all completed. After the buildings were laid out upon the sand-table, the animals were added as suggested by the children. Dogs, sheep, cows, horses, and even a woman churning, were made from clay, and all helped to lend interest and reality to the work.

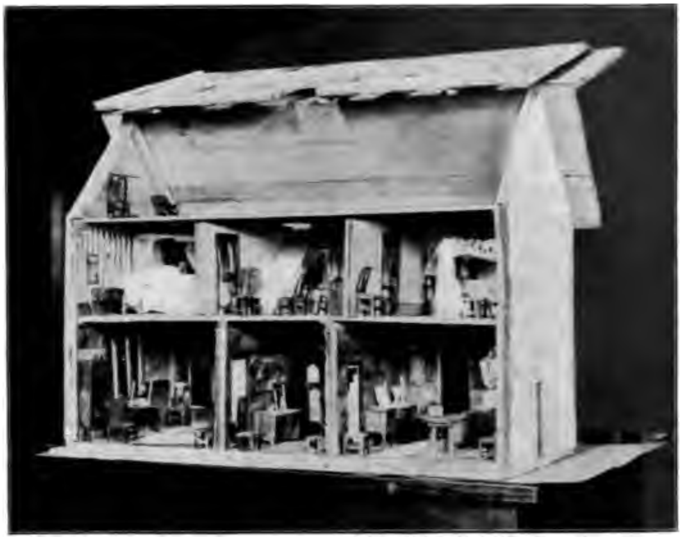
The constructive work of the second grade called for clay and textiles as working material, except for the wooden trowels for gardening. These were triangular pieces of wood, sharpened on the edges, with handles nailed to them.

Early in the year the third grade was particularly interested in the more primitive peoples, and especially in their means of transportation by land or sea. After some discussion on the subject of transportation by land, each one of the class drew a plan of the vehicle he would make, if he were confined to the materials these primitive people had at command—logs, the bark and boughs of trees, leather, and strong grasses. It was decided that holes might be bored by using the auger bit, since the pieces of wood used were too small to be bored by the use of fire or crude tools. The results were most interesting when worked out, improvements suggesting themselves to the children as the actual materials were worked upon. The principles of both the wagon and wheelbarrow were seen in the results, and when the springtime came, the planning and making of two wagons and two wheelbarrows suitable for their gardening came only as a more elaborate working-out of the principles already mastered. During the winter the life and adventures of the vikings of the Northland, and of Ulysses of the southern country, were a basis for much of the constructive work of the grade. Armor and weapons typical of the two peoples were made; designs for boats were drawn and worked out of cardboard, with appropriate designs on the sails—the fiery dragon for the viking boat, and a beautiful Grecian border for the boat of Ulysses, with its bird-head at the prow.

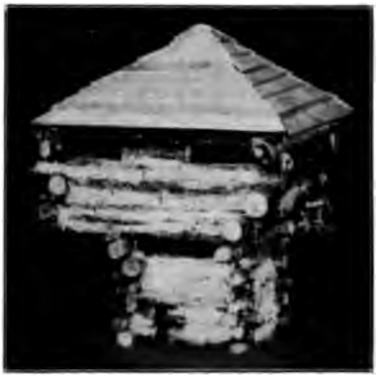
The fourth grade studied the early colonial history of Virginia, and during the winter laid out on the sand-table Jamestown and the surrounding country, making the small town of cardboard, clay, and sticks. The Indian village was also built, using birch bark, cardboard, sticks, and raffia. It was a natural outgrowth of this to build the colonial house of that locality and period. Each one of the children had his distinct part in this building, with its six rooms and attic, its hardwood floors, its fireplaces, the outlying houses, and slave quarters. The furniture was made of paper to the definite scale of an inch to a foot. In connection with their study of milk and its properties, in domestic science, the class made a cheese-press, in which fifteen cheeses were made at one time.



FIRST GRADE FARM BUILDINGS.



PLANTATION HOUSE, MADE AND FURNISHED BY THE FOURTH GRADE.



FORT DEARBORN, FOURTH GRADE.

ART.

CHARLES ZUEBLIN,
THE UNIVERSITY OF CHICAGO.

GOETHE said once: "Fortunate is he who at an early age knows what art is;" which you may take as a platitude, but Philip Gilbert Hamerton has said that in the whole realm of art literature you will hardly find a sentence of equal significance.

We all have had the experience, either in ourselves or in others, of trying to overcome years of neglect or bad teaching; and often no amount of information, no amount of subsequent training, will neutralize the mistakes of the schools. I fancy most of us have gone through some sort of art-training. Unfortunately for many, that usually has meant merely a sort of encyclopædic survey of the great painters and sculptors of the world. Unless we can learn some of the elements of art, we cannot by mere knowledge of art products remedy our deficiencies.

I want to speak here very briefly about the function of art with respect to occupation, social welfare, and culture, believing that we shall satisfy these needs best if in preparation for occupation we give students a knowledge of form, color, and design; if in preparation for social welfare we consider especially the beauty of environment; and if as a contribution to culture we consider the fine arts and the lesser arts in harmonious relations. Those of us who were educated in the public schools, or even the private schools, twenty or thirty years ago, will have had scarcely any instruction in form, color, and design. I remember very well the style of public-school instruction — if I may quote a personal experience — which obtained in Philadelphia at that time. I stayed in the country late one autumn, and came into school every day, with permission to take one session until two o'clock. The teacher of my class stayed through the lunch hour every day, and for the first time I learned something of her skill in free-hand drawing, when she prepared the blackboard by a slate pencil for the coming chalk lessons. That was the character of instruction given throughout the schools of Philadelphia at that time. At the end of fifteen years of school life in Philadelphia I am perfectly sure the average student did not have the remotest conception of the elements of art. I presume the other schools were not much better. Even today you go into schools where teaching in art is given; it is still called drawing, and that drawing is still too seldom the means of recording one's own impressions.

Tolstoi defines art as the power of telling someone else what one sees. A little boy gave to his teacher at one time in a sketch his impression of the vacation school by an attempt to show the boy who went and the boy who did not—two very grotesque figures, suggestive of the before and after of patent-medicine advertisements. I have used it as a lantern slide, trying to show how we should make use of our impressions, no matter how rude the art. The grotesqueness of it always strikes the audience, and I have taken it as a reflection not on the boy, but on the audiences, that they did not get an idea when they saw it carried out, because of the crude form. He showed the idea as it came to him, but of course without training he did not have the power of recording it skilfully, of making it vivid. The kindergarten is supposed to begin the removal of those deficiencies from which we suffer, by teaching children form and color. As the kindergarten methods penetrate into the grades, there is given more of the conception of design. I have had the pleasure of visiting some of the manual-training schools in this country, and I would speak especially of the Mechanic Art School in St. Paul, where the endeavor and actual accomplishment with every child are teaching him to express his own ideas. In Chicago there has been the introduction of color-work with children, and it has been found that, while only 50 per cent. can reproduce in black and white, about 99 per cent. succeed in the use of color; which implies that the child has in him usually some artistic idea until crushed out by false methods of instruction.

It has been the custom to stuff children full of facts; as someone said recently, we paraphrase the old idea about the little star: "Twinkle, twinkle little star, teacher's told me what you are." Occasionally now they are allowed to find out these facts for themselves. Very few of them, however, acquire these very simple fundamental things — a conception of form, color, and design.

What is the economic value of this form of teaching? The greatest necessity of the workman of today is adaptability. He is frequently stranded for lack of it. I remember living with a friend in London who kept bachelor quarters, and marveling at the skill of his domestic — a man who seemed equally capable in the garden, kitchen, or garret. I wondered that such a versatile man should be found in domestic service. My friend told me he had been a skilled watchmaker who had perfected his special skill so assiduously that he had failed to do anything else, so that when they invented a machine which could do his work, and that was taken away from him, he was stranded; and so he became a house servant. That is the condition of the majority of workmen today, if good workmen; if comparatively inferior and unambitious, the condition will not be so difficult. In the schools of today the power of adaptability should be given chief attention; children should be taught to use their hands to express the ideas of their minds. It is astounding to see what little children can do with clay. Those of us who never got beyond the crude mud pies which we taught ourselves to make after we had escaped from school can scarcely realize what children can do in the schools today.

I think sometimes we hear rather excessive denunciations of the value of reading and writing from such people as John Ruskin; yet, after all, it is asked whether in learning so much from books we have unlearned the capacity for observing with the eyes and executing with the fingers. Beginning with clay and other plastic materials, we can carry children up to a recognition of what a soft finish on a table means, contrasted with the mirror-like tables with which we have been familiar — to realize that the texture of wood signifies something. This is an equipment for industry which it may take years for us to appreciate.

You will witness this curious phenomenon in the world today: a man who can manage men can go with ease from one situation to another; he can go from being an engineer on a railroad like the Illinois Central to the position of an engineer on the Panama Canal—as happened here recently— simply because he has that power of adaptability. But the average workman has not that capacity, and is thus limited in his occupation.

John Ruskin's famous dictum in regard to good architecture is, first, that the material should be good and true; second, the ornament natural; third, the designer left free to work from his heart. We have stifled that capacity in the workman, if he ever had it. I do not believe, of course, that the change of methods in schools will immediately bring large rewards; it will probably bring rebuke from employers. But, after all, there is a growing demand for individual products, and the workmen themselves will not long be content with the humdrum limitations of today. People say, however, that this development of handicraft is reactionary. But that is not the case. There is a movement which is running counter to that of machine industry, which comes very largely from the fact that even in the midst of the mechanical triumphs of today we are insisting upon individual workmanship. The time is coming when either we must go back to lead a primitive life, or we must have the opportunity to express individuality in workmanship; and it is being hastened in the schools today by giving children, not a knowledge of the great sculptures, but the power of design, which emanates from a knowledge of form and color.

A few years ago, after an extension lecture which I gave in an Iowa town, the drawing teacher in discussing the subject gave a little exposition on the blackboard of the meaning of proportion, and drew the outline of a house, and put the windows and doors in where they ought to be. That was twenty years after I left the grade schools, and yet it was the first intimation I had had of what proportion meant in a building. I am afraid there are a great many people quite as ignorant as I was as to any proper conception of form. The most graphic illustration of this is in the decline of colonial architecture at the time we supplanted humble bricklayers by skilled architects. The old colonial buildings are invariably satisfactory in form and color. The builders had no education in the schools — only instinct. They had a tradition of form. The moment that generation died out and the trained architects of the schools undertook to draw their conception of colonial architecture, it began to decline. They have not in their souls any tradition of proportion, and they draw something out of their minds which is mathematical and not artistic. Half a century ago in England they were talking about the significance of the oval. Everything was built upon the oval. Everything today is built upon the city building lot. The conception forced upon the architect is the city building lot, and this again is mathematical, being compelled to produce a thing which a mechanical civilization wants.

A friend of mine was standing, or rather sitting, reverently looking at the Venus di Milo recently, when a woman brought in a troop of American girls; and they all stood, craned their necks, and looked at the Venus. Then she led them over, and they looked at the fragments. They looked as tenderly at the fragments as they looked at the statue. They had seen every element of it preserved, and they were satisfied — checked it off, and went home. That is not the attitude of the illiterate. It is the attitude of the average untrained mind until he has seen such an amount of true art that he *knows*. That is the remedy — to see enough until one knows. We can do this in the schools. I repeat, therefore, that in preparation for occupation the most necessary thing is to get the power of adaptability; and that can best be done, not by definite technical training, but by elementary teaching in form, color, and design.

To secure social welfare we must secure beauty in environment. We have made the greatest progress in the decoration of schools, and the landscape architecture outside the building has advanced marvelously in our day. Many will remember the bare white walls and blackboards of the old-time schoolhouse, with nothing to relieve the bleakness unless some teacher could not resist the impulse to put in plants. Now we have frequently good pictures, although too little discrimination and too many of them. Then we have better school grounds. Unfortunately, some schools have none. I have in mind one in Chicago which stands flush with the sidewalk. The children must play in the street. Back of the school are two very little spaces where the children could not all stand up at once. Of course, we cannot decorate those tiny spaces. We must have courage to attempt greater things. We must get a beautiful environment for the school. Not that the children shall be told just what that means, or that they shall be taken up in order to these pictures, as we would in a good religious ceremony go around and reverently view each one; but in some way or other they will absorb the influences, if given the opportunity. In our efforts to teach new ideas we have unfortunately too often taught them in the same way as the old ideas. An example of this is the two vacation-school children who were viewing with the greatest possible interest the eagles in a cage in Lincoln Park. One said: "Come on, let's go away, or we will have to draw them." They enjoyed them to the utmost until they thought of some formal task. The unconscious influence of those noble birds would have been equally beneficial.

But what are you going to do even with a beautifully decorated building, if after leaving it the children must be turned loose amid the conglomerate architecture of Lake avenue? The best teacher cannot eradicate the influence of bad grammar at home, and the best art teacher cannot eradicate from children the impression of the advertisements along the elevated and steam railroads. Even private residences bear advertisements, probably because the backs and the sides of almost all houses in Chicago are unworthy of anything but advertisements. I am not so sure but the owner is right to have some sort of paint to cover up the sort of brick that you see in some of those buildings. The child cannot go out of this building and keep all that he gets here. Consequently we shall have to undertake a reformation, training this generation as well as the next. That again means going down to the fundamentals. A great many people have on their walls beautiful oil paintings and in their houses hideous furniture; and they do not know it. I do not know whether it is that they put all their souls into the old masters and divest themselves of their surroundings. It is true that music and the fine arts are of infinitely less importance than the furniture, the hangings, and the kitchen fittings. We can never eradicate those impressions by any amount of education in the fine arts. Until the environment becomes harmonious we are going to undo the work of the schools. If the schools are going to effect anything, they must be met half way by civic and home improvement.

Of course, in cultural improvement we must get a considerable notion of the fine arts, because they are intimately related to culture. Music, literature, sculpture, and painting — we must know something of these if we are to get a knowledge of art; but they are rather the means of finding out things than real knowledge. The average woman's art study club is merely learning to finger the lexicon by cataloguing art products. That is valuable knowledge, but it gives us not one single æsthetic conception. There again we have to go down to the fundamentals. As Ruskin said, to study carefully the Grand Canal in Venice was worth a visit to all the galleries of Europe.

Sargent has painted many beautiful portraits of the millionaire and the millionaire's beautiful daughter, but he has never done anything for a private patron like his decorations for the Boston Library. No painter could rise to such heights in painting the picture of any millionaire as in painting some beautiful and ennobling subject, something that touches his soul. A wonderful influence is sweeping over the country, giving the people a conception of the difference between mural painting and easel painting — a work of art related to a building and a work of art not related to anything. We gain thus not only greater artists, but a culture not merely for the favored people who can go to Europe, but for the multitude who, if they cannot have this abundant knowledge, at least can grasp the fundamental principles that will teach them something of harmony. I take it that it is not impossible with the forces already at work in the schools to teach form, color, and design so as distinctly and valuably to influence the mind of the child and lay the foundation for this culture which will give us that sense of harmony and make for the child of the future a more beautiful environment for the expression of his ideas.

THE APPLICATION OF ART TO HAND-WORK.

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THE difficulties of the application of art to the teaching of hand-work in schools arise from the fact that very few teachers are artists. It is impossible for a man to communicate to others what he does not know himself. Not everyone has the capacity for art, and even for those who have, the attendance for a few months at a summer school, or even the taking of a short course in design, can hardly be sufficient preparation.

One not infrequently meets with teachers giving instruction in manual work who have made the discovery that there is some connection between things of beauty and the work in hand of which hitherto they have only seen the mechanical side. For such, of course, there is some hope; but the stress of school work and the multiplicity of things they are expected to know renders it generally impossible for them to spend sufficient time in developing their latent faculties. They see the beauty of some picture by Raphael or of some modern landscape, and perhaps of some example of architecture, but the way of art by which these were created are incomprehensible to them, and the connection between such objects of beauty and the work to be done in wood or in weaving is hidden from them, because they have had no fit training in the appreciation and the practice of design.

For these reasons it seems as though specially trained teachers were necessary to teach those branches of work to which design is applicable; and design is a necessary part of all better hand-work.

The ugliness of almost all the articles of modern manufacture can be combated only by the development of the sense of beauty in the people who buy them, and the gulf between the really artistic work which is done by a few, and the want of beauty in the articles of common use, can be bridged only by the training of the young of the nation to see with their own eyes beauty of form and color. The hideousness of the ordinary wooden or stone house in town or country, and the tawdry decoration and graceless form of such things as the usual forks and spoons, can vanish only when a future generation shall have been trained to see and to feel that they are ugly; the designing and making with their own hands of such simple articles as are within their power to make at a suitable age is the surest way of developing better taste in children.

For those who wish to teach design there is but one way of developing what faculty they have for it, and that is by drawing, and at the same time by being with students and teachers who have a better appreciation of such things than they have. Hence it is obvious that a course of design at a real art school is the best means open to them. Such a course must last for years, not months; and they had better attend the regular classes for art students than any specially devised "normal" course, in the first place because the standard required is a higher one, and in the second place because they will have the opportunity of being among more students who are really artistic. It need hardly be said that the ordinary "normal" school is the last place to study such things.

The beauty of such articles as children can make with tools or with a loom depends, as does the beauty of all things, chiefly on simple proportions, on the balance of spaces or the harmony of colors. The subtle principles of such balance and harmony have been set forth in many a lecture by Dr. Denman Ross, and a course in his summer school at Cambridge would be a great help to a teacher. Some things connected with the balance of values in design are expounded in Mr. Dow's book on composition, which might well be placed in any teacher's library. But the reading of a mere statement of these things is not sufficient; the study of art can be made only by the practice of the art. You can no more learn to draw and to design by reading about drawing than you can learn to sing by reading text-books. The daily practice of drawing lines and filling spaces with design is the only royal road open to the student.

Of course, manual work can be done with very little regard to design, and is useful in itself. The greater part of the so-called sloyd is good training for the hands and brains of children of a certain age; and in the same way the mechanical drawing introduced by Mr. Liberty Tadd has much to recommend it as mechanical work. In the one as in the other case there is very little beauty of design applied; but there is no reason why the good there is in both systems should not be joined to beauty of model and finer appreciation of form.

And now as to the children. Probably the first art — art in the ordinary acceptation of the term, and apart from the subtleties of pedagogical and anthropological pedantry of which we have had a good deal — to which they are accessible is music. And the music best suited to them is to be found in the folk-songs of the peasants of different countries; for natural selection through many generations has preserved a large number of beautiful melodies in Germany, in Italy, in Russia, in Scotland, and elsewhere. The first training in the artistic emotions can be accomplished by the musical singing of these simple songs. I say musical, because in a great many kindergartens and grade schools it is not music which is produced by either the teacher or the pupils. The music should be taught by a musician daily, and not by an unmusical teacher with a weekly visit from a musician as superintendent. Of course, if a teacher is musically gifted, she should be encouraged to train herself, and be allowed to take part in the teaching.

The next forms of artistic handicraft for young children are clay-modeling and basket-making. The latter should be done with somewhat coarse materials. In this, as in other kindergarten work and in drawing, there have been made many mistakes in giving work which is too fine and too small for the children, much to their detriment.

At the age of six or thereabouts drawing with the full arm on the blackboard after the system of Mr. Tadd, can be used. Each day an exercise of fifteen or twenty minutes would be in place.

As the children grow, the basket-maker can be gradually led on to simple forms of weaving, and in connection with it to the relation and harmonizing of color; the brush-work with water colors which would go on at the same time is excellent if capably conducted by one who has an eye for color. Then at the age of about nine carpentry of a very simple kind may be introduced, and at about twelve simple carving in low relief might be added.

Such work as is done with the fret-saw, or so-called Venetian iron-work, is less desirable than the other crafts which have been mentioned, as there is less variety of skill required in them, and the results are not so interesting.

One word as to results, and at the same time as to technique. Children want results — articles made to take home and show as their work; and much of this desire is natural.

But the true workman who is learning a craft cares little for the objects which he can produce in comparison with the satisfaction of his desire to acquire skill in the use of his tools. And it may be that in many classes too much stress is laid on "objects made," and much too little on the acquisition of technique.

Manual training is also mental training, and the power of concentration required to use any art really well is of more worth than rooms full of articles made for use or for show.

It is said that children cannot be got to practice the use of a tool. There is even one rather well-known superintendent who asserts that the practice of technical studies on the violin are useless. This, of course, is foolishness, although it may be granted that such practice as may be best for an apprentice of sixteen is impossible for children of ten; still it would seem that more regard to technique and more practice in the use of tools, regardless of the child's haste to produce finished objects, is desirable, than has been the case in most of the manual-training schools.

It is as great a mistake to set children to any sort of manual-training work before they are fit for it as it would be to teach them Latin grammar at the age of eight, as used to be the fashion. It is frequently the case that both brush-work and carpentry are begun far too early. Any kind of work may be a pleasure when it is done by one who is either the master of it or who feels that he may attain to mastership. But there is nothing so disheartening to a child as to be set to do what is beyond his years.

And this remark applies, of course, to the artistic side of hand-work. You must not expect appreciation of the composition of a Japanese color-print or of a Botticelli picture from young children. But you can set before them models which any but the perverted among them will admire, and which yet have nothing in them to contravene the laws of beauty obeyed alike by Botticelli and by the Japanese. And in these truly lies the difficulty named in the creation of beauty in simple forms.

We have far too little respect for art, and anyone who learns to draw and paint thinks himself, and is thought to be, an artist; but this is not so. Of the thousands who go through the Paris art schools not 5 per cent. are artists. And the first great step toward the introduction of more art into manual-training classes may perhaps be possible only when the majority really recognize the high mission of art and the reality of beauty, which is trodden underfoot by the present turbulent course of commercialism.

SCIENCE IN THE FRANCIS W. PARKER SCHOOL.

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It will help us in our discussion if we distinguish two phases of science-teaching. Science is organized knowledge, and the two phases to be distinguished are (1) gaining the knowledge and (2) organizing it.

The presence of the latter phase as a conscious motive of teacher and pupil distinguishes the work of the secondary from that of the elementary school. The latter is "science," in the exact and restricted sense of the term; the former we will call "nature-study," including under that term a study of both animate and inanimate things.

It is the purpose of this paper to discuss the point of view, methods, and values of the science-teaching in our school, and to show the relations of nature-study to systematic science, and of both to mathematics.

"Nature study," says Hodge,[1] "is learning those things in nature which are best worth knowing, to the end of doing those things which make life most worth living." The end of the study is thus *action* — doing things. But what are the things the doing of which makes the pupil's life now and in the future most worth living, and what are the things which are therefore best worth knowing? "They are indicated in a fundamental way by the relations which the human race has found it necessary and valuable to develop with nature" — relations which have existed from prehistoric times, and which will persist through every advance of civilization.

These relations are mainly with *living* things — animals and plants. Upon plant and animal life primitive man depended entirely for his food, his clothing, and, excepting the cave-dweller, for his shelter. Our modern civilization has not altered this fundamental dependence. We, too, go to plants and animals for our food and clothing, while the forest still furnishes most of our shelter. The chief difference between us and primitive man is the way in which these necessaries are secured. The primitive man who sought refuge from large animals by climbing trees and hiding in caves, who obtained his vegetables direct from nature's bounty, and his flesh by preying upon small animals, offers a profound contrast to the modern dweller in cities, to whom wild animals are unknown, whose food grows hundreds and even thousands of miles from his table, and whose clothing comes to his hand ready-to-wear.

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[1] C. F. Hodge, *Nature Study and Life* (Boston: Ginn & Co.), p. 2. The writer wishes to acknowledge with gratitude the influence which Dr. Hodge's teaching and book have had upon his own views of nature-study.

Let us look for a moment at the steps by which man has advanced from his former simple and immediate relations with nature to his present complicated and remote ones. This progress has been due to a better control of the animate and inanimate forces of nature, and gaining this control has been and is the nature-study of the race.

The first step in this long series was the *subjugation of animals,* which victory left man no longer the prey of the cave bear and tiger, but their pursuer and hunter, and insured his continued existence. Even now, however, the conquest of animals is far from complete. Insects still destroy the crops of whole counties; vermin still annoy us; microbes still destroy thousands of lives.[2]

The next step was the *domcstication of animals.* After man's existence was secure, he came to recognize that some animals could be made his friends and helpers instead of remaining enemies.

> The first animal tamed was the dog, which is still the idol of the child's heart. Then came, also before the dawn of authentic history, domestication of the horse, sheep, goat, horned cattle, and most of our domestic birds; and it is self-evident that the family or tribe which first developed patience and intelligence to tame and utilize animal helpers must have rapidly outstripped all rivals in the race for life.

The next, and possibly a greater advance of the race, was the *cultivation of plants.*

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[2] This and the two following paragraphs are condensed from Hodge. His chapter on "The Point of View" is a masterful argument for the predominance of the biological matter in nature-study.

This has constituted the largest factor in the transition of tribes from wandering nomads to stable, populous, civilized communities. In the stability of landhold we have the beginning of home as distinguished from the casual camping ground; and with the founding of homes came commerce and arts, literatures and sciences as well.

While man has been developing by the subjugation and domestication of animals, and the cultivation of plants, he has also been concerned with inanimate things. Ever since he began to earn his bread by the sweat of his brow, he has needed and used tools. In fact, we may say that his entire progress has been possible only by the aid of implements. A step in advance far greater than the invention of tools was made when man seized the forces of nature and compelled them to do his bidding. The harnessing of nature's inanimate forces is the last step in the nature-study of the race, and, in fact, reached its height only in the inventions of the nineteenth century.

There can be no doubt that in broad lines the development of the individual follows that of the race, and that the active doing things with nature which has been the chief means of advancing the race will prove most helpful to the child. To place the child in the conditions which have caused the race to advance, we must give him opportunity for action which seems of real value to him and worth his greatest effort. That these conditions are normal to the child and most favorable for his growth is shown by his own natural instincts and spontaneous activities — his love of pets, his desire for flowers, his joy at seeing plants grow, his eagerness to handle things and to make them go. These instincts are toward active relationship with things, and not toward passive contemplation. The child wants to play with his dog, and does not care at all whether Towser has three or five toes on a foot. He wants his garden to grow so that he may eat its products, and he cares little for the number of seed leaves on his beans and corn. A wide range of active first-hand contact with nature is the normal condition for the development of the child, as it has been the chief means in the progress of the race, "and to substitute for this contact the study of pictures, museum specimens, or caged animals is to miss the substance for the shadow."

We have tried to follow these principles in the selection of our work in nature-study. We have sought to make the work active, to have it of practical importance, and to bring the children into direct contact with nature. In the lower grades the attention is directed mainly to the study of living things and the use of tools, while in the upper grades the study of natural forces is gradually introduced.

The establishment of relations with animals begins in the kindergarten. The school cat and her kittens are wonderfully interesting to these little people. I am not certain that they know how many ears or how many tails she has, but pussy always received a joyous welcome from them. The upper grades, too, have a warm feeling for her, and anyone who watches the face of a sixth-grade child playing with the cat at recess will conclude that the animal has its function in a school. The first grade has had the care of a guinea pig for several months, and I never see a more happy or more eagerly busy crowd of children than when I watch these first-graders cleaning this animal's house in the morning and getting him ready for the day. Now, the care of him during the school day even does not suffice them, but the children must take turns in carrying him to their homes after school. The third grade has had an aquarium of turtles in the room through the year, and other aquaria have been in various rooms. Just now there is a great deal of interest in the development of a lot of tadpoles.

By far our greatest success with animals is with our bees. Our other animals are obliged to live in artificial surroundings and to lead lives more or less foreign to their natures. The bees, however, have a regulation hive, go out of doors to gather honey or pollen as they desire, build their combs and rear their young in their own fashion—all exactly as if their only function in life were to make honey for some hard-headed farmer. The only differences between their present life and what it would be if the farmer owned them are that they must travel some eight inches through a glass-topped tunnel to gain access to the open air, and that we can remove the wooden sides from their hive and look through glass at the walls of their city and the manifold activity there. The hive is in the kindergarten room, and to the kindergarten children the bees are a never-ending source of wonder. The little people stand by the hour and watch the bees coming into the hive, and count those carrying pollen until they get to a hundred. Sometimes one child counts the bees with yellow pollen, while another takes those with red, and a third those with brown. The older grades also watch the hive with interest and have observed the laying of the eggs, the growth of the larva, the sealing up of the cells and distinguishing characteristics of worker and drone cells, the emergence of the young bee, and have made some study of the structure of the insect.

It is only a short step from getting acquainted with our domestic animals to the study of those which we meet in our garden and which affect our crops for good or ill. We have met thus far the earthworm, the groundbeetle, the cabbage worm, and the potato beetle. The latter two have not yet appeared this year, but probably they will not forget us. The young children always seem to think that earthworms eat the roots of plants, so when the kindergarten child first sees an earthworm he proceeds at once to cut him in two with his hoe. To convince the child of his mistaken opinion, it is only necessary to place a few earthworms in a jar of white sand, on the top of which is placed a little black earth, or, better still, leaves of various plants. A surprising increase in the quantity of black earth will occur within a few weeks; and if this experiment is accompanied by one to show the importance of black earth to plants, the child will not again deliberately cut earthworms in two. Experiments of this sort are now being carried on in the kindergarten, the second and fourth grades.

In the study of the cabbage worm and potato beetle the first point to be considered is how our crops can be protected from their ravages. In order to do this most effectively, we are led to the study of the life-history of the insect to learn from what place he makes his appearance and at what point we can attack him most successfully. While the study of the life-history is begun from this utilitarian motive, it is soon pursued for its own sake. The cabbage worm seems an unpromising field for anything interesting, but when we watch its rapid growth, its formation of a cocoon, and its emergence as a white moth which immediately proceeds to lay more eggs, we have an example of the life-history of all insects — one of nature's deepest marvels.

Besides the insects, we have found this year in the garden two toads. These were captured, brought in, looked at, and their food was discussed. Then they were put into the garden and a board placed for them to live under, in the hope that they would stay there and devour insects. I am sorry to say that the inducements offered were not sufficient, and that they have apparently forsaken us.

Besides domestic animals and those found in the garden, the child is also interested in the wild life around him. The latter does not touch him so closely, but it appeals far more to his imagination and sense of the beautiful. Our aims in its study are to have the pupil realize in the life of the wild creature something akin to his own, and to find the part the creature plays in the economy of nature. For both these purposes we study the habits, food, and life-history of the animal. In knowing these facts we become acquainted and even friends with him. With this study a certain amount of naming and learning to recognize is essential. We try to do these things in ways which permit initiative on the part of the children and give as full play as possible to their powers. Cages have been made in which insects can be raised and their development watched. For preserving collections we have adopted a device[3] adapted especially for life-history collections. It consists of two plates of glass kept apart by a wooden rim; the specimens to be mounted are glued to one of the glasses,[4] and the whole is fastened together with passe-partout paper.

In attempting to reproduce in school those relations with plants which have aided the civilization of the race, we have had two places to work, the school grounds and the garden.

The object of the work on the grounds is to make the surroundings of the school as beautiful as possible. The raking and seeding of the lawn which have to be done every spring, and the spading and manuring the soil around the hedges, have been done by the older pupils. Every spring we have had a formal planting. The work which any one pupil does on these occasions amounts to little, but in calling his attention to the desirability of having beautiful surroundings and in cultivating his æsthetic emotions we think it well worth while.

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[3] See HODGE, p. 53.

[4] A little glycerin in LePage's glue will make it stick to the glass.

The garden is managed with an entirely different object—namely, to bring every child into close contact with the soil and have him learn the value of his own efforts in making things grow. We have tried to give to every child below the eighth grade some piece of ground which should be entirely his for this summer. He has chosen what he wanted to plant, has himself done the entire work of planting, will have the entire care of it during school, and will get all the products to dispose of as he likes. By this means he reaps the result of his own labors as directly and immediately as if he were making something in wood; only in this case his product depends not upon his own efforts alone, but also upon the closeness with which he makes them conform to the laws of nature.

Besides these individual beds, each grade has a large bed of some product upon which the class works together. The object of these class beds is, first, to furnish an illustration of the growth of the staple products of the country; second, to make experiments in their cultivation. The planting is generally preceded by some study of the best method to use. A careful record is made of what is done, and the results obtained in the fall are noted and recorded. Sometimes two ways of doing a thing are tried and their results compared. We hope that the records thus made will prove of value to future classes in showing the best procedure for our particular soil.

We use all or most of the products of these beds in our school work. Last year, for instance, the third grade grew tomatoes, and in the fall made them into pickles. The kindergarten grew popcorn, which was used at Christmas. The fifth grade grew flax, which they rotted and hackled and prepared for spinning. It had got too brittle, however, to be spun, probably because it was too old when cut. They have another bed of it this year.

The sixth grade grew sugar beets, and tried to extract and refine the sugar. Now, the extraction of sugar from sugar beets is a matter of some difficulty. Slicing the beets, soaking in water, and boiling down is easy enough, thus making a molasses, sweet but black and ill-smelling, and tasting disagreeably of the beet. For two years we have experimented in getting rid of these undesirable qualities. We have not succeeded yet, but our hopes were never higher. This year we have planted more sugar beets than ever before, and while we are not taking orders for sugar, we expect to obtain some which will be edible, if not marketable.

This year we are attempting to develop the economic importance of agricultural work, by keeping a careful record of the cost of the garden and the value of its products. The cost of manure, plowing, and other labor is divided among the different beds. Each grade keeps the record of the cost of the seeds, fertilizer, etc., used on its own beds. In the fall it will reckon the market value of the crop, and compute the profit or loss. In some grades this will be carried farther to find how much would have been made upon an acre of ground under the same conditions. The yield of our crops per acre will be computed and compared with the average yield in Illinois and other states. By this means we shall have an opportunity to compare our work and soil with that of the average farmer, and to see if we ought not to do better; and also it will enable us to realize how hard the farmer has to work for his product, and something of his importance to the community.

This spring we have started a new experiment by planting seeds of trees. We desire in this way to get the children acquainted with seeds and seedlings, to have them get over the feeling that there is something more mysterious about the appearance of trees than other plants, and to learn a lesson in patience. We hope that the patience will be rewarded, and that in four or five years we may see the blossoms on our own peach trees, and a little later on our pear, plum, cherry, and apple trees as well. The care of the trees, the budding, grafting, the digging of borers, and the keeping off of other insects, will furnish enough to do and enough to learn amply to justify the planting of the seeds.

I might at this point speak of some limitations of our school work in these lines. The children are absent in the summer—the time when the garden is at its height, when the labor is most exacting and the returns most abundant. The work is also limited by the smallness of the plots which can be assigned to each pupil. A four-foot square is the largest given any child. This is too small for him to really work on. As an object-lesson it is of the greatest value; but it is, after all, only an object-lesson, a model of a garden, an illustration of a farm; and models, object lessons, and illustrations can never take the place of the real things. The same is true even to a greater extent of our animals. A school cat and guinea pig are good things, but one cat for two hundred children does not give a sense of ownership nor a feeling of responsibility for its care; and one guinea pig can hardly establish with eighteen children those relations of mutual aid and dependence which have been the main channels by which the domestication of animals has contributed toward civilization.

The difficulty would not be helped much by a multiplication of cats or guinea pigs in school, and an increase in the size of the garden, while desirable, is impossible. We must look to other sources than the school for the establishment of these personal active relations with plants and animals which are of too much educational importance to the child to be omitted from his life. The country home is the natural and most effective place for the establishment of these relations; and though the city home offers much less chance for such work, yet there are few houses which do not possess some square feet of back yard that would look better for the planting of vines or flowers, or could be made to produce a few vegetables. It is a pity when any of these opportunities for the children are not utilized.

The great problem of a garden is, after all, how to make the plants grow, and a child working in a garden is sure in a little while to be seeking for things to help his plants. The main factors which influence the growth of plants are soil, moisture, temperature, and light. The finding out of the influence of these factors upon the plants, and the discovery of methods by which they can be controlled for the best growth of the plant, start several lines of inquiry. Some of these open up topics of importance enough to be carried farther than the immediate needs of the garden demand. Some examples of this are given below.

The second grade performs experiments in growing things in different kinds of soil — sand, clay, loam, etc.; and the fourth grade carries the experiment farther and studies the effect of a particular kind of soil occurring over a large area.

The weather conditions of sunshine, rainfall, wind, and temperature are recorded in the lower grades. The effect of the weather upon the garden is, however, only one of the reasons for doing this work. The immediate effects of its changes upon the pupil and upon vegetation and animal life at large are other potent reasons. Several forms of weather records are kept in the lower grades, and a set of monthly landscapes is painted by some grades which shows strikingly the effect of seasonal changes. This work is extended in the fifth grade to a study of the climate of Chicago. In the sixth it is made the point of departure for a study of annual changes, especially of temperature, in which study the change in the sun's slant is shown to be the cause of summer and winter. In the seventh grade there is a study of climatic conditions all over the earth, in which the causes of climatic differences are discussed. This work is greatly helped by the fact that the pupils come to it with some idea of the meaning of statistics — such as thirty inches of rainfall in a year, and a mean monthly temperature of 20° or 65°— and are able to use the meaning of these figures in imaging the conditions of other places.

Finally, the direct effects of different heat, moisture, and light conditions upon the plant are observed. These observations and accompanying experiments are, of course, only of the most obvious kind at first, such as growing plants in windows where the light comes from one side, or growing them in the dark. Later comes the observation of characteristics of plants which naturally grow in different conditions — in swamps, prairie, ravine, sand dunes, etc. Lastly, the pupil tries to find out precisely the effect of water and light upon a plant, by a series of experiments in plant physiology in the seventh grade.

Cooking is a form of activity with natural products, we may say of nature-study, which has existed from the dawn of history. It furnishes an admirable and logical supplement to the work in the garden, and it is also a point of departure for a great many experiments which are more purely scientific; *e. g.*, the effect of acids upon carbonates, the growth of yeast and its products, tests and characteristics of various food principles, and the effect of heat upon them. These are not, however, the chief reasons for teaching cooking. The chief reason is that it answers our original requirement of nature-study; for is it not one of the things the doing of which makes life most worth living?

Many of you will agree with me that hand-work is the most efficient means which could be devised for enabling the children to gain control of the inanimate forces of nature. It is thus repeating the last step in the nature-study of the race; and its influence must be included in considering the science work of the school.

I wish to say a little about the relation of nature-study to mathematics. Out of the impressions and images of the external world are built all of our mental pictures and concepts. Words are of value only in so far as they awaken images in our mind of things we have already experienced. Mathematical symbols and expressions, unless they stand in the pupil's mind for some definite relationship in an external, concrete world, are meaningless and worse than useless. The material world is the place where these relationships exist, and getting control of natural forces and turning them to use is where the relationships become of importance to man. Work with these forces must, therefore, be the most natural and effective place for the study of these relationships which are the foundation of mathematics.

I have already mentioned in connection with the garden some things which could not be done without the use of arithmetic, and several more whose significance could not be understood without the use of number-processes, sometimes quite complicated. We are finding more and more of these problems each year, and a portion of the number-work of all grades consists of problems drawn from, or necessitated by, the work in science. It is the unanimous opinion of the teachers that these problems carry home the reality of symbols and the meaning of processes as no amount of book-work can do, and that what is thus learned for the sake of immediate use is regarded of more worth and longer remembered than problems done with no motive but the gaining of facility in some process.

The above is not the case with concrete problems in which the pupil has no interest. In these he must understand the concrete thing or illustration first, and then the mathematical process. His difficulties are thereby increased, not diminished. This is especially so in many of the mercantile and commercial problems in text-books, where the thing talked about — promissory note, bill of exchange, stock, or bond — is entirely foreign to the life of the pupil. These things may have their place in the elementary school, but that place is after, not before, the arithmetical processes involved are well understood. The pupil's attention can then be directed to the conditions existing in the outside world which give rise to the paying of interest and commissions. The conditions understood, the principles underlying the transactions become plain and the mathematics almost obvious.

But these problems are too far from the life of the pupil to be used for the developing of his mathematics. The problem for the development of mathematical principles must be one whose solution is important and of immediate interest to the pupil, and one in which the concrete facts are easily seen, and in which the attention can therefore be directed to the mathematical principle involved. In the right working out of such problems comes the pupil's surest and most rapid mathematical progress. We have a good number of such problems already, and it is a cherished hope that we may finally obtain enough for the development of all needful mathematical principles, and for some, but probably not for all, of the drill necessary to give facility and accuracy.

We now turn to the second step in the acquisition of a science — the organization and systematization of the knowledge. The pupil should finish the elementary stage with the knowledge of many of the things of nature around him and considerable control over them. He has undoubtedly also grouped many of the facts together, and knows the relations of many of these groups to himself. But up to this time he has not done much thinking about the relations of the facts and forces of nature to each other. We make the first extensive attempt to have the pupil do this in the eighth grade. The work of this grade, like that of preceding ones, is designed to secure an active contact with nature by observation, experiment, and work; and it seeks in addition to summarize and put into their proper relations the facts of science which the pupil has been learning through the seven previous grades, and to discover the relations which exist between those great organizations of knowledge known as the sciences of chemistry, physics, physiology, and botany. I shall in the following tell with some detail how this is done.

We began the work by calling the pupil's attention to the fact that most moving objects, such as street cars, locomotives, and automobiles, had a source of power or energy, which generally could be easily located. Animal bodies also move and do work, and the question was propounded as a basis for the year's work: "Must animal bodies, especially the human body, also be supplied with energy, if they are to do work? If this is so, from what source does the energy of the human body come?"

We first tried a set of experiments with pulleys, which showed that no combination of them could be made which would do more foot-pounds of work than was used up in running the pulleys. We generalized this to other machines, especially levers. We then began a study of the human body, and found that its work was done through a system of bony levers, and that the muscles applied the power to them. The muscles, therefore, must perform at least as many foot-pounds of work as are done by the hands and feet. A study of the structure of muscle showed the class that the power came from the contraction of a multitude of tiny striped fibers. Our question then became: "What source of energy gives these fibers the power of contraction?"

The class at once suggested food as the most probable source. So we tried a set of experiments on the composition of the common foods, and found that they all contained carbon. We knew that the burning of carbon outside the body produced heat, and that heat could be transformed into any desired form of energy by the action of the steam engine, dynamo, etc. We, therefore, set to work to find what becomes of carbon when it is burned. After experiments extending over about four weeks, we came to the conclusion that carbon, in burning, unites with a gas called oxygen and forms a new substance, which is a heavy gas having the properties of putting out flame and turning lime water milky. This gas was found to exist to a slight extent in the atmosphere, and to a much greater extent in exhaled air.

Our problem was then to find how the food reaches the muscle. We first learned the different food-principles, and the test by which each can be recognized, the most important sources of each, the principles which should be observed in cooking each; and had some practice in the application of these principles. The digestion of each of these food-principles was studied; then their absorption and the various routes by which they get into the blood. In connection with this we studied the anatomy of the digestive system, and later of the circulatory and excretory systems. Most of this study was done from a papier maché mannikin, which represented solid models of the various organs. An effective method of work was to have the pupils make drawings of the organs being studied. The above work traced the route of the food from the mouth to the muscle.

We next studied respiration, and found that the lungs are constantly taking oxygen from the air and replacing it with carbon dioxide. We found that blood has the power of absorbing oxygen where that element is plentiful, and of giving it up where it is in demand. It then required small faith on the part of the pupils to believe that the blood carried oxygen to the muscle and brought back carbon dioxide. The matter was summed up as follows: The blood brings to the muscle sugar and proteid foods and oxygen. It carries away carbon dioxide and broken-down proteid.

The children at this point wrote papers answering, as well as they could, the question: "How does the muscle get its energy?" These papers required the hardest thinking done in the course. The pupils very generally arrived at the conclusion that the energy came from the union in the muscle of carbon and oxygen; that the carbon came from the sugar and proteid in the blood; that the oxygen was brought from the lungs by the red blood corpuscles; and that the union formed carbon dioxide, which was carried away by the blood and eliminated by the lungs.

The class then raised the question: " If animals are constantly producing carbon dioxide, why does not all the oxygen of the air become replaced by carbon dioxide." They suspect that plants have something to do with it, and we shall spend the rest of the year in showing how plants are able, by the action of sunlight upon their green leaves, to change carbon dioxide and water into starch and oxygen, the one of which becomes food for man and the other his breath.

This great cycle of carbon from the inorganic, inert carbon dioxide, up through the plant where it is elaborated into starches and sugars, into the animal where, after becoming a part of still more complex tissues, it is finally reduced again into carbon dioxide, is to me the most impressive illustration of the conservation of matter. The marvel deepens when we think that this carbon, separated from its oxygen and seeking it again, carries the energy for all human endeavor, and that, when once used, it can be made available again only by the action of energy from that far-away source, the sun.

This course serves as an introduction to our high-school science. From it, as a starting-place, we can continue the study of energy and its various changes, which is the science of physics; or investigate the transformations of matter, which is chemistry; or we can study systematically the structure and behavior of animals, which is zoölogy; or that of plants, which is botany. In any case, we ought to know how the particular group of facts studied is related to the other groups, and that nature and science are not manifold, but one.

We have chosen physics for our second year's work in science. Our work here is along more conventional lines than that of the first year. Of course, we use the laboratory method, and stand by our original principles of having the pupil get into as active relations as possible with the thing studied; and we select for that purpose those topics which seem of practical value in life. But in all these respects we can make no claim to uniqueness.

There are two respects in which we do differ somewhat from the ordinary school: (1) Our pupils begin, and still more in the future they will begin, this course with considerable knowledge of the facts of physics. For instance, the third grade studies the water supply of Chicago; the fifth, the boiling of water and the heating apparatus of the building; the sixth, air-pressure and the barometer. This gives the pupil a much broader and better base for his generalization than when he must make his generalizations and learn his facts at the same time. (2) An unusual amount of apparatus has been constructed by the pupils. It needs no argument to show the better understanding and control of the apparatus, which this gives them.

The relation of mathematics to this work in physical science is a most interesting problem, but it is too large to be treated in this paper. Suffice it to say that the relationship has long been recognized by teachers of physics, and is beginning to be by teachers of mathematics; but little use has thus far been made of it in teaching. It has been found during the year that the physics has shed much light upon some parts of algebra; *e. g.*, meaning of negative numbers and their addition and subtraction, proportion and variation, the equation as a law, square root. During the next year a consistent attempt will be made to develop the algebra of the tenth grade from suitably selected experiments in physics.

And when, at last, the pupil has finished his school work in nature-study and science, what will he have gained from them?

First, from a utilitarian standpoint he will be familiar with a good many industrial processes and be able to do amateur work in several. He will have understanding and control of those forces of nature with which everyone comes into contact in his daily life — those involved in cooking, housekeeping, gardening, the care of animals, etc.; and will have the knowledge and manual dexterity to use them to his own ends. In a broader sense, he will know the mutual relations and interdependence of many industries — a thing of value in whatever vocation he may adopt.

Intellectually, he has been thinking in scientific things and by the scientific method. The scientific method of thinking may be summarized as follows: gathering data by observation, making a hypothetical law or generalization from these data, deducing consequences from this law, and testing the consequences by experiment. If the results of the experiment tally with the hypothesis, the latter may be stated as a law. Now, Dr. Dewey says that this method of thought demanded by the science is the only possible way of true thinking.[5] The study of science ought, therefore, pre-eminently to develop the power of clear and logical thinking. This is a deduction which, I believe, is verified by a study of the facts.

Nature-study also aids intellectual development by establishing new interests. The fulness of one's mental life is largely dependent upon the number of things in which he is, or may be, interested. To one familiar with her, Nature offers a wonderful variety of such interests. She is by turns amazing and quieting, thrilling and peaceful, beautiful and terrible. To her we may go for inspiration or solace, for work or for rest. To be her friend is to have a certainty of perennial interests.

Ethically, science studied as we have indicated helps accomplish one great result: it substitutes an active for a repressive method in dealing with moral questions. It teaches boys to study birds and build places for their nests, instead of molesting them and making game wardens necessary for their protection. It teaches boys how to grow grapes and peaches of their own, and does not make laws to prevent their stealing from others.

Finally, we may also claim for science a distinctly religious value. For do not the order, regularity, and precision with which effect follows cause in nature's domain indicate a single underlying and unifying law? And what is religion but to work in accordance with this law for the creation of happiness and the good of men? The child who cares for an animal, raises a plant, or makes some article for the comfort or well-being of men is working hand in hand with nature. And what truer religion can there be than that he thus become the image of his Creator?

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[5] JOHN DEWEY, address before the Central Association of Science and Mathematics Teachers, November, 1903.

FALL PLANTING.

WILBUR S. JACKMAN,
PRINCIPAL OF THE UNIVERSITY ELEMENTARY SCHOOL.

Most flowering bulbs should be planted in the autumn. In this latitude the proper time is the month of October. It is usually not difficult to interest pupils and parents in the spring planting of seeds; but there has been comparatively little done in this direction in regard to the fall planting of bulbs, shrubs, and trees. The great majority of the earliest spring flowering plants are those that begin the year before in a bulb that lies through the winter at a greater or less depth below the surface. The frost is scarcely out of the ground when the first tender shoots appear, and in an incredibly short time, even sometimes with the snow flying, they blaze out in a wealth of color that contrasts strongly with the dull surroundings.

There is no good excuse for a school or home that can have the use of any ground being without these flowers. They are even more easily planted than seeds, and, when once in the ground, they require almost no attention. They grow, flourish, and die in a period when no weed is able to compete with them for place and power.

A bulb is something like a big underground bud. Its structure, which varies somewhat with different plants, can be readily understood by dissecting an onion or a tulip bulb. At the base is a short nub which answers for a stem to support the leaves that, much thickened, closely inclose the tender growing points in the center. The bulb is a form that the plant has invented which enables it to carry through the inhospitable winter into a second season a large food supply that it has spent all of the first season in manufacturing. It is not necessary, therefore, for a bulbous plant to postpone the period of flowering until a large foliage area has been developed, as most plants that come from the seed in the spring must do. Its thickened leaves, at the first peep of spring, are ready to give up their rich nourishment for the immediate development of flowers and fruit. The foliage leaves of the second season are chiefly concerned in building up a new bulb for the following year.

I. GENERAL DIRECTIONS FOR PLANTING.

1. *Soil.*—All plants have acquired certain habits which the gardener must respect if he is to succeed with them in cultivation. To understand bulbs, go to the localities where wild lilies of different kinds grow, and note the conditions. They will be found usually in loose, loamy, moist ground, but in areas not always covered with water. A shaded woods with a deep soil of leafy mold is a favorite spot. They will not be found in dry, hard, and unshaded clays. In the winter they lie well covered with dead leaves which in a wonderful way keep the earth from freezing.

The conditions, therefore, for bulbs the size of a tulip, etc., are (*a*) deep, loamy, sandy soil; spade up the ground at least a foot in depth; (*b*) a well-drained location; round the surface of the bed so the water will not stand on it in winter; (*c*) a loose, leafy cover for the winter. If the location is on the sunny side of a wall or house, the start will be much earlier in the spring, but the blossoms will not likely last so long.

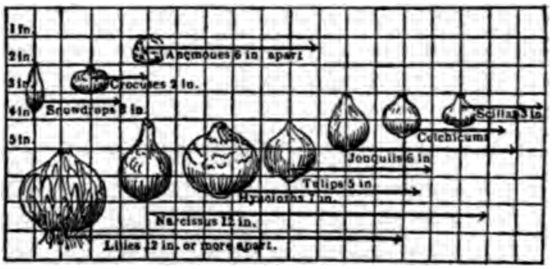
2. *Arrangement.*—It is best, generally speaking, to plant so that the flowers will appear as masses of color. A notable exception to this plan is the crocus. It may be planted with fine effect over a grassy lawn in groups of twos or threes. With a spade or trowel lift one edge of a piece of sod, making a hole about three inches deep. Place in this two or three crocus bulbs and replace the sod, patting it down. For weeks in the early spring they will beautifully spangle the sward with white and purple and gold. A clump of snowdrop bulbs tucked away in a sheltered nook will surprise one with its modest bloom before the snow is gone.

The accompanying chart, reproduced from *Popular Gardening,* gives clearly in graphic form the depth and distance from each other that the common bulbs should be planted. The best way, perhaps, is to spade out the entire bed to the required depth, and then set the bulbs firmly in the ground in the desired order.

Carefully cover them with fine earth, and then soak the bed with water. After this fill up the bed to the top, leaving the surface rounded.

II. SELECTION OF BULBS.

It is not necessary to name here specific varieties, as each one will wish to make his own choice from the florist's catalogue. Among the various kinds that may be counted upon to give satisfaction are the following: tulips, hyacinths, snowdrops, daffodils, scilla, narcissus, jonquils, crocus, and lilies. The florist's catalogue will indicate the time of blooming of each of the different varieties, and the blossoms may be so timed as to appear simultaneously or in succession, as may be desired. In general, the early and single varieties of tulips and the single hyacinths are the most pleasing and the easiest to raise. In buying, it is always best to select large, first-class bulbs which may be depended upon to give a vigorous plant. They cost more than the "bedding" sizes, but the results justify the extra expenditure, and if one must economize, it is better to get along with fewer plants.



Chart, Showing Depth and Distance Apart of Bulbs.

III. OTHER PLANTS.

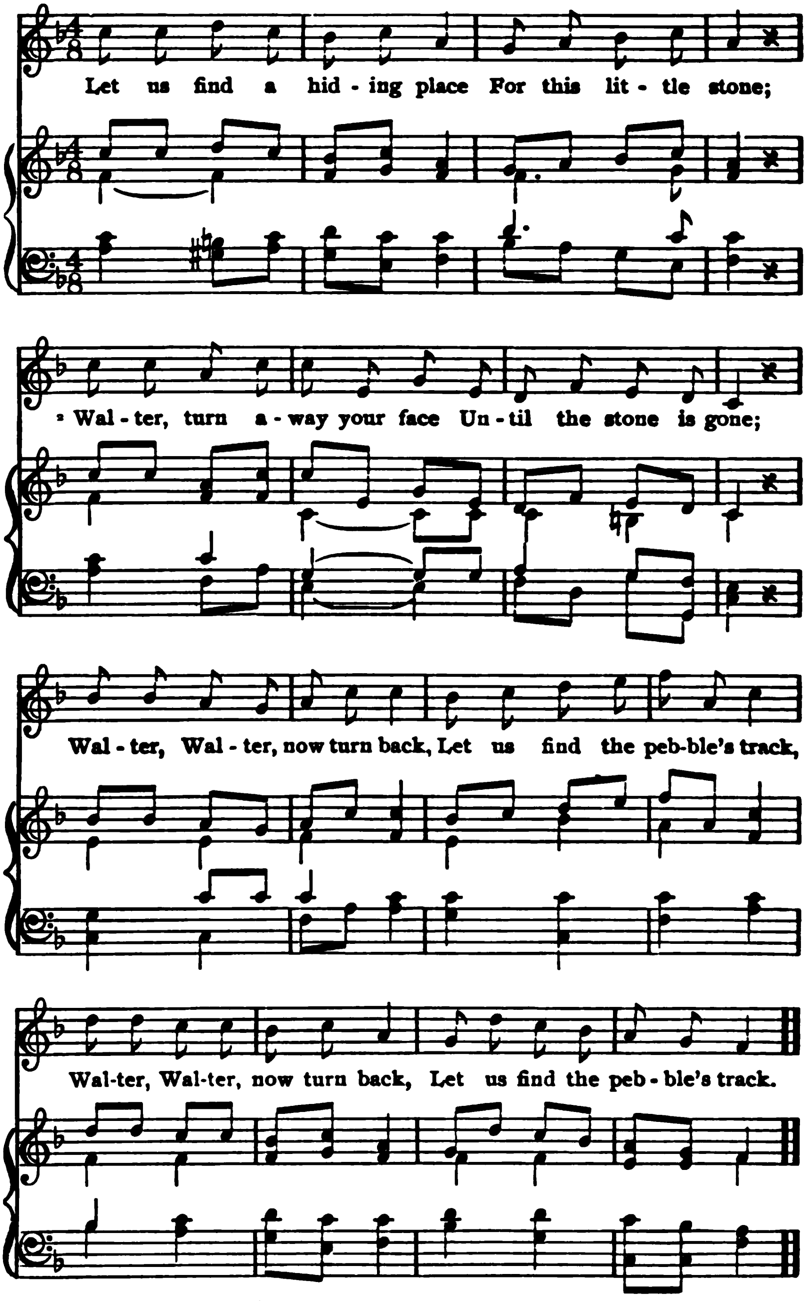
In addition to the bulbs, there are many other flowers that may be planted in the fall; sweet William, peony, iris, hollyhock (the roots), columbine, phlox, and pansies (seed) are among the number. Autumn is the most favorable time also for planting trees and shrubs. This may be done as soon as the leaves fall. At the end of summer one is apt to have fresh in mind the particular spots about the house that during the summer would have been greatly improved by the presence of a shrub or tree. In planting the latter, some of the hardier fruits should not be overlooked. The Whitney crab, for example, yields abundant and excellent fruit, and is a beautiful tree either in leaf or blossom. It should be remembered, too, that the smaller fruits, such as gooseberries, currants, raspberries, and blackberries, will do well along a fence or wall in a space that otherwise may easily become unsightly. If such out-of-the-way places are thus filled up there is at once a sufficient motive for keeping them in order.

IV. CARE.

As winter approaches, the roots of all the plants should be well soaked with the hose, if the rainfall is insufficient. The bulbs and other plants of this general class should be covered to a depth of four to six inches, if possible, with that best of all nature's litter, autumn leaves. The covering should extend several inches on all sides of the beds. If leaves cannot be obtained, then straw, or other light material, may be used. When the severest weather is over, the litter may be in part removed. As the ground thaws out, take it all away and lightly stir the surface among the bulbs. The ground should be kept thoroughly moist, but not too wet. Ordinarily the water from the melting snows will be quite sufficient to bring out the earliest flowers.

PEBBLE GAME.[1]

MUSIC BY MRS. CROSBY ADAMS


Let us find a hid - ing place For this lit - tle stone;
[2] Wal - ter, turn a - way your face Un - til the stone is gone;
Wal - ter, Wal - ter, now turn back, Let us find the peb-ble's track,
Wal-ter, Wal-ter, now turn back, Let us find the peb - ble's track.

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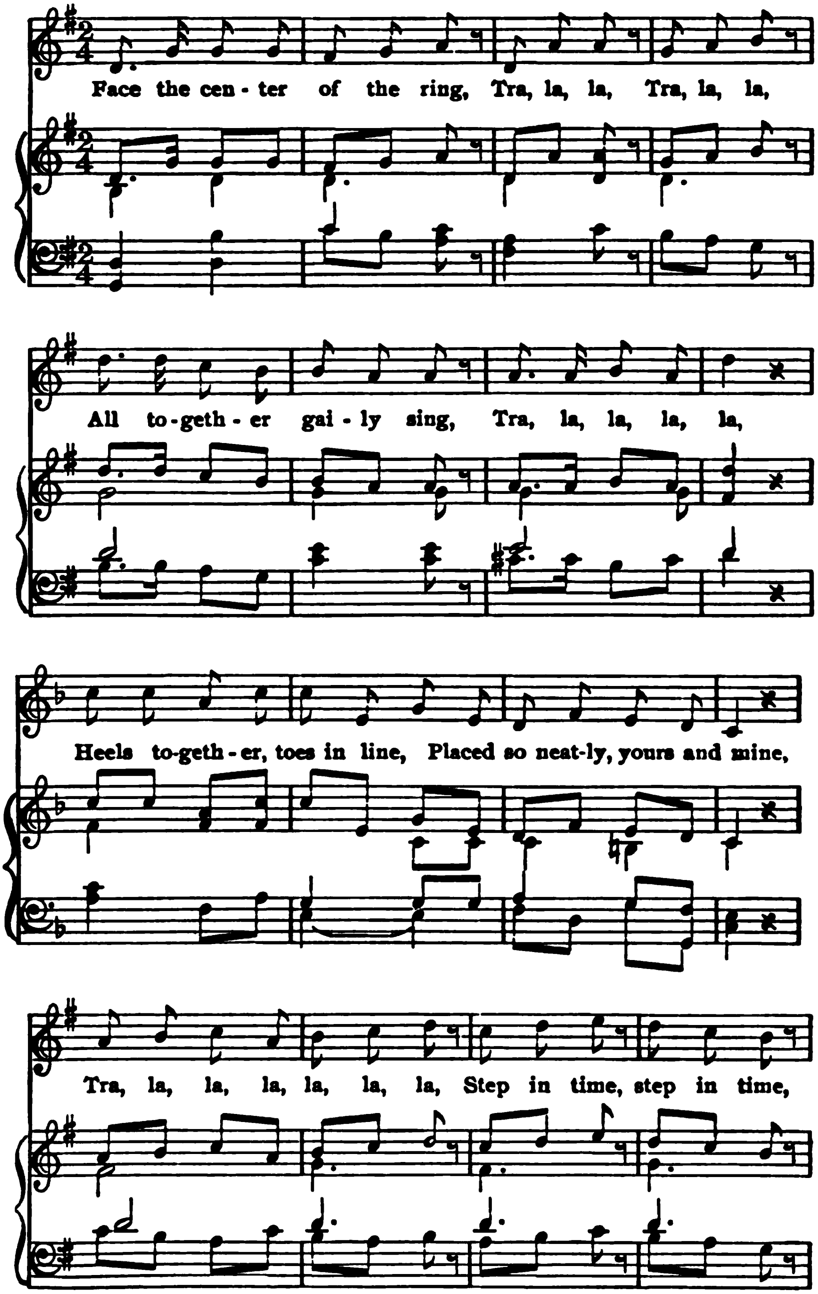
[1] It is believed that this game and these words originated in Germany.

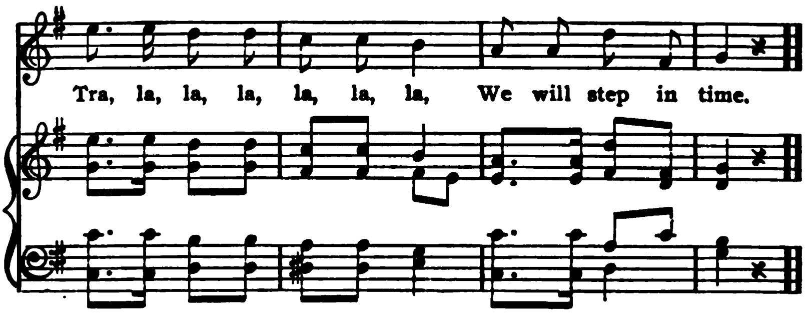
[2] The name of any child playing the game may be inserted here.

FORMING THE CIRCLE.

AUTHOR OF WORDS UNKNOWN

MUSIC BY MRS. CROSBY ADAMS

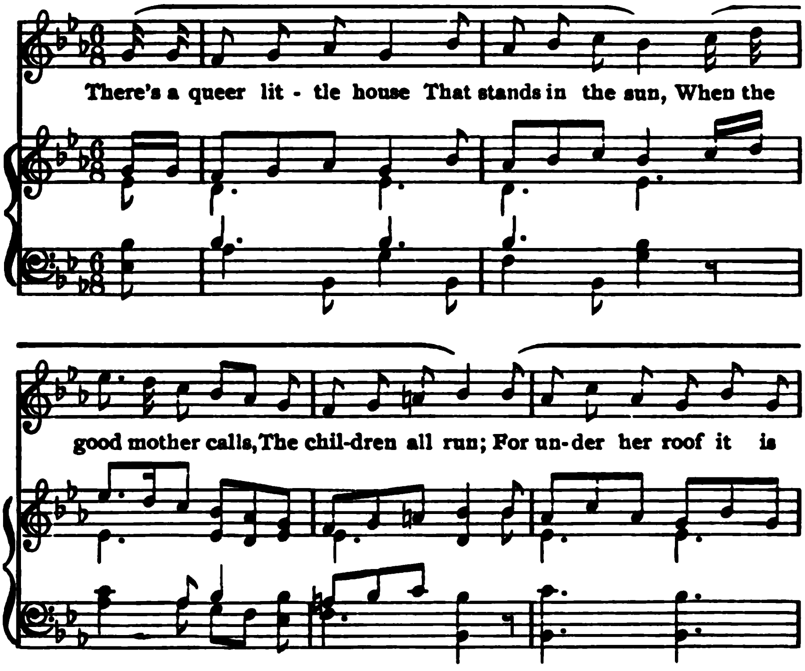

Face the cen - ter of the ring, Tra, la, la, Tra, la, la,
All to-geth - er gai - ly sing, Tra, la, la, la, la,
Heels to-geth - er, toes in line, Placed so neat-ly, yours and mine,
Tra, la, la, la, la, la, la, Step in time, step in time,

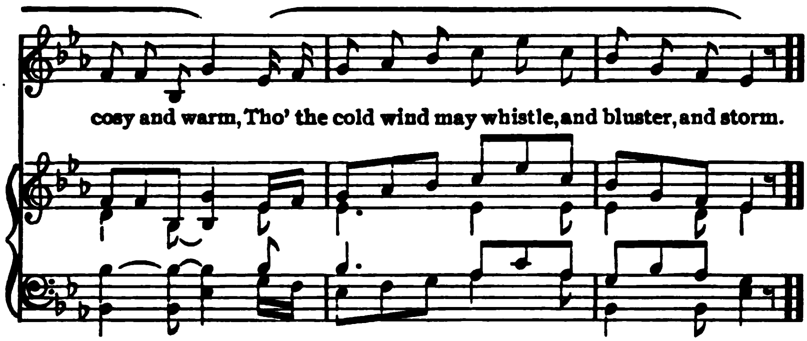


A RIDDLE.

AUTHOR OF WORDS UNKNOWN

MUSIC BY MRS. CROSBY ADAMS


There's a queer lit - tle house That stands in the sun, When the
good mother calls, The chil-dren all run; For un-der her roof it is


cosy and warm, Tho' the cold wind may whistle, and bluster, and storm.

In the daytime that queer
  Little house moves away;
And the children run after
  So happy and gay.
But it comes back at night,
  And the children are fed
And tucked up to sleep
  In their warm, cozy bed.

This queer little house
  Has no windows nor doors;
The roof has no chimneys,
  The rooms have no floors;
No fireplaces, chimneys,
  Nor stoves can you see—
Yet the children are cozy
  And warm as can be.

The story of this
  Little house is quite true;
I have seen it myself,
  And I'm sure you have, too;
You can see it today,
  If you watch the old hen
As her downy wings cover
  Her chickens again.

—Anonymous.

EDITORIAL NOTES.

The Unused Energy of Boys and Girls

It is a far cry from what a boy or girl in the grammar and high schools is really capable of doing to what there is actual opportunity for doing in even the best schools. The tendency in this day is to do too much for the pupils in every way. The educative material that we offer is of the "predigested" type that not only spoils the digestion, but destroys the appetite. The teacher cannot too often recall to himself that, beyond what he is able to provide in the way of opportunity for effort, there is very little that he can do toward the education of anyone.

Teachers, under the usual conditions, are so completely cut off in their work from tangible results that can be measured in common terms of value that they are apt to forget what an amount of potential power for actual work exists in the boys and girls with whom they deal. *These boys and girls can do things when they get a chance.*

What Some Boys and Girls Can Do

Recently, out on the endlessly sprawling prairies of the Nebraska ranches, the writer had a fresh realization of this fact. On one farm out there are two boys, twelve and fourteen years old respectively, who have taken care of a hundred acres of corn this summer, and the work was well done. These boys will clear two or three thousand dollars in cash as the tangible result of their year's work. One finds himself puzzled when he tries to think what even the best school in the country could offer these boys as an inducement to enter its halls which would justify them in leaving their ranch. If these two children were to enter an ordinary school, what would it give them? They would exchange the plow, the harrow, and the corn cultivator which they now handle with a perfectly definite motive, and through the use of which they get equally definite results—they would exchange these for tools that have no particular meaning, and for work that, so far as they can immediately discern, has no particular value. They are now associated with people from whom they purchase live stock, machinery, and many of the necessaries of life, and to whom they sell their grain and other produce. Mistakes in these transactions would be serious business, and these youths, therefore, are acutely training their powers of observation, judgment, and reason. They are also finding out, at first hand, the moral points at issue in dealings between man and man.

What Inducements Can the Schools Offer?

Place these boys, now, in "the best schools," and every one of these character-building, man-making relationships would be severed. They would become members of a class or group whose organizing ties perhaps do not go beyond a common interest in football or some other game. So far as the output is concerned, there is no obvious reason why such a group should exist. Their associations, instead of being of an organic character, definitely formed, are simply the accidents of the situation. To offer these boys the advantages of a school where, instead of their annual output worth thousands of dollars, they would find their product to be a bit of basketry or bric-a-brac worth but a trifle, would very likely seem to them as though we were presenting them a gold brick.

Two Freshmen

I saw another youth in his teens who enters the university this fall. He may or may not have met all the entrance requirements, but I saw him harness a wild horse into a team and drive away eight or ten miles one Sunday evening to a ranch that he might be ready for work early next day. After watching the performance, it seemed to me that he might be credited, on admission, with a couple of orations in Cicero. Afterward, as I observed him handle his team on the steep sides of a cañon and with a great sweep bring hay into the stack, a ton at a time, it seemed no more than right to pass him on the Harvard entrance experiments in physics. Earlier in the season, on short notice, he had planned and executed the delivery of a thousand bushels of grain to a point some thirty miles distant; and this, it would seem, might be considered the equivalent of several electives. On the whole, it is doubtful if any university could afford to bar him out.

I saw his younger sister mount a wild Indian pony which immediately ran away with her. The girl, however, did not know it was running off, so it made no difference to her, though it did excite the bystanders. Recently she made a business trip of some hundreds of miles for her father, and in returning drove a double team thirty miles of the way by herself over the prairies. These two young people will enter a university this fall that will never suspect how much they know, and it will probably graduate them without ever finding out the one-half that they can do.

What These Examples Mean

I do not mean by this that we should close our schoolhouses and go to ranching. These cases are cited merely to show once more how much good life-making stuff young people in their teens, and even younger, have in them. Here are four young people—and they can be matched by thousands in city and country—that are, several times over, self-supporting. No doubt they are overdoing it somewhat on the ranches, but the schools are certainly at the other extreme. Why should not self-maintenance be an integral part of an education? There is not a healthy boy or girl in the world who, after entering his teens, if opportunity were offered, could not make his "keep and clothes" and, besides, in his spare hours, learn all that the schools have to teach him. Many even younger could do the same. Many, as a matter of fact, are already doing it, and you can generally recognize every one of them by his step a block away. A son of one of my neighbors has put himself through the grammar school by lighting lamps, and it is not a very lucrative job either. Another did the same, in part, by running a very small printing-press, and still another, by organizing and running a daily-paper route. These are the city counterparts of the ranch boys, and they make plain the same fact that the youth of the period have a redundancy of energy that is now absolutely lost to themselves and society.

True Education Includes the Idea and the Fact of Self-support

Self-support and scholarship both have a common denominator in character. They are not alien and mutually repellent. The school on the ranch should not make the ranchman forget his ranch, but it should keep the ranch from turning him into a clod. Likewise, the ranch, standing here for the idea of self-support in the school, should keep the scholar from educating himself into a state of utter helplessness.

Enforced Tasks and Enforced Idleness

The average youth of today is in a sad predicament. His time is mainly divided into two periods — one of enforced tasks, and another of enforced idleness. In the former he is compelled to deal with the empty shells of mathematics, science, language, and history that seem but remotely related to any ideal that he at that age is capable of forming. In the latter, from pure *ennui,* he is driven into all the excesses and vagaries that are supposed to be peculiar to his age, but which he seeks one after the other as a relief from his own idle self. Fraternities, football, cigarettes, and all-around loafing are the last resort of a bored and motiveless youth. If in these early years a boy or girl could have an opportunity and proper encouragement to engage in wholesome, productive, and remunerative work, it is doubtful if big books on the dangers of adolescence would be necessary. If a man between the ages of thirty and thirty-six were to be placed under conditions as unfavorable to his life as those which surround him from twelve to eighteen, the chances are that the psychic phenomena of the former period would be equally startling.

The real problem, therefore, that confronts both teachers and parents is that of providing such opportunities for employment, along with the other school duties, that, as early as possible, the boys and girls shall feel some of the pleasures that are due only to those who are made independent through self-support.

Parents' Associations

The annual report of Mrs. Harding which appears in this issue will be read with interest and profit by all who are interested in the general movemnt to bring the school and home into closer co-operation. Besides detailing the work of the Home Committee, of which Mrs. Harding was chairman last year, the report gives an insight into the spirit and scope of the association as a whole which must deeply impress one with the importance of the part which it can take in the educational work of the community. That the association can accomplish definite results is shown in the decisive action taken in regard to the fraternities and sororities in the high school Without the hearty co-operation of the Parents' Association it would have been difficult, if not impossible, to deal effectively with these troublesome organizations.

The monthly meetings of the entire body were devoted to discussions of great importance. At one of these, the diseases of children were considered, and on this occasion medical specialists read helpful papers. Another evening was given to physical culture and athletics; another, to certain lines of school work presented by the teachers, and so on. Probably one of the first parents' associations in the country was that organized by Colonel Parker more than twenty years ago among the patrons of the Cook County Normal School. During his connection of nearly eighteen years with this institution he spared no effort to educate the parents as well as their children. I well recall how many times over and again questions relating to the school were discussed, until the parents had an understanding of what was being attempted. It accordingly happened that, when the fate of the school hung in the balance with the politicians, as it often did, it was the influence of an intelligent parents' association that saved the day.

It cannot be too strongly emphasized that the relation of such an association to the teaching corps should be that of co-operation. Criticisms there may be, but they always should be made from a sincere desire to help solve the difficult problems which confront teacher and parent alike.

In an early issue, the ELEMENTARY SCHOOL TEACHER hopes to publish in full the program for the year for the benefit of its readers. It hopes, also, to publish reports of similar organizations throughout the country.

W. S. J.

BOOK NOTICES.

SMILES'S *Self-Help*. Edited by RALPH LYTTON BOWER. New York: American Book Co. Pp. 304. $0.60.

THIS well-known volume of essays is here presented in a form adapted especially to American readers. Since its first publication, fifty years ago, it has been translated into many languages, it has attained a widespread and enduring popularity, and has exerted a permanent influence upon character and conduct. These essays show that the happiness of every individual must depend upon his own efforts, and that true success is to be attained only through diligent self-culture, self-discipline, and self-control. In the present edition several passages of a distinctly local and British interest have been omitted. Many helpful explanatory notes make the text intelligible to even very young students. An appendix contains brief biographies of most of the important persons mentioned. This is a book which should be used for supplementary reading in every school.

Our Bodies and How We Live. By ALBERT F. BLAISDELL. Revised edition. Boston: Ginn & Co. Pp. 352. $0.65.

IN this revision of Dr. Blaisdell's *Our Bodies* the text has been thoroughly revised and in many parts entirely rewritten. The author's intent has been to bring his well-known book fully into touch with the latest and best scientific thought on physiology and hygiene. Many of the special features of the older book which have met the generous approval of teachers and educators everywhere since its first publication have either been retained or made still more effective. There are the same simple and interesting style, the same careful consideration of practical everyday health, and the same emphasis upon the use of simple experiments.

In addition, the revised book is fully illustrated with engravings and line cuts based upon original drawings and photographs; and the mechanical execution of the book as a whole marks an improvement over the older edition.

Steps in English. By A. C. MCLEAN, THOMAS C. BLAISDELL, AND JOHN MORROW. Book I, pp. 245, with illustrations, $0.40; Book II, pp. 352, with illustrations, $0.60. New York: American Book Co.

THESE books constitute a distinct innovation in teaching language in elementary schools, which is at once sensible, practical, and modern. They teach the child how to express his thoughts in his own language, and do not furnish an undue amount of grammar and rules. They mark out the work for the teacher in a clearly defined manner by telling him what to do and when to do it. From the start lessons in writing language are employed simultaneously with those in conversation; and picture study, study of literary selections, and letter-writing are presented at frequent intervals. The books do not contain too much technical grammar, nor are they filled with sentimental twaddle and gush. The series will be welcomed by teachers who are tired of antiquated methods, and desire live, up-to-date books.

HOWE's *Handbook of Parliamentary Usage.* New York: Hinds & Noble. $0.50.

THE unique feature of this new handbook is an ingenious visual arrangement of the whole subject-matter of practical parliamentary law in such order that when the book is opened in the middle, the chairman, the speaker, the member who next has the floor, or anyone else, has *before his eyes* a complete summary of *every rule* needed in the conduct of any business meeting. The surprising practicality of this arrangement and of the system of cross-reference used can be fully appreciated only by actual inspection of the book itself. Moreover, it is "really and truly" pocket size, and so does not have to be carried in the hand to and from meeting, but slips easily into and out of the pocket, without crowding or discomfort.

DICKENS's *Christmas Stories.* Edited by JANE GORDON. New York: American Book Co. Pp. 304. $0.50.

THESE mirth-provoking and yet pathetic stories, written when Dickens was in the full maturity of his marvelous powers, are now issued in the well-known series of "Eclectic School Readings." They are repeated as originally published, except that some of the descriptions have been left out, others abridged, and allusions unfamiliar to American readers have been omitted. All the qualities that have made the name of Dickens a household word remain. It would be well if all school children could be introduced through this book to the master of English humorists.

Gateway Series of English Texts. General Editor, HENRY VAN DYKE. New York: American Book Co.

GEORGE ELIOT's *Silas Marner.* Edited by WILBUR LUCIUS CROSS. Pp. 336; with portrait of George Eliot. $0.40.

Burke's Speech on Conciliation with America. Edited by WILLIAM MACDONALD. Pp. 164; with portrait of Burke. $0.35.

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Elementary Algebra. By J. H. TANNER. New York: American Book Co. Pp. 374. $1.

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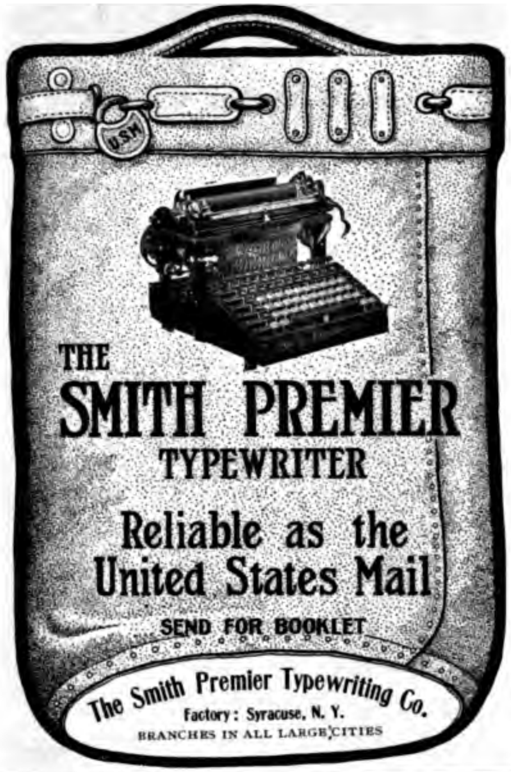

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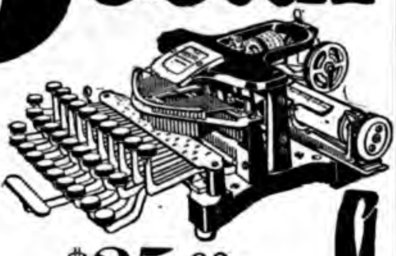

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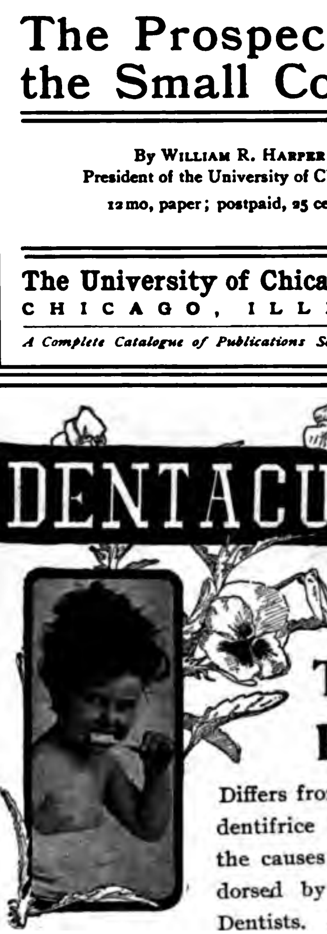

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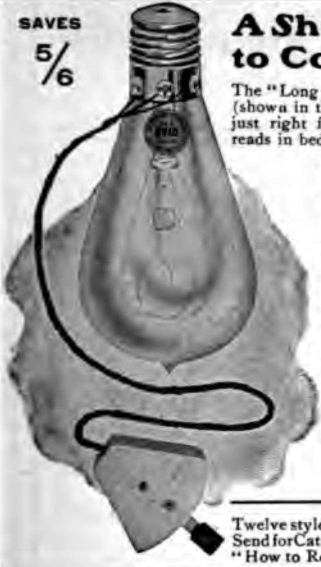

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CONTENTS FOR NOVEMBER, 1904

THE VALUE OF PSYCHOLOGY FOR TEACHERS - - - - - - M. V. O'SHEA 129
SCIENCE, GEOGRAPHY, AND MATHEMATICS - - - - THOMAS M. BALLIET 142
THE SELECTION OF SCHOOL SONGS - - - - - - - EDWIN L. NORTON 148
TECHNIQUE IN ELEMENTARY MANUAL TRAINING - - HARVEY G. HATCH 159
HAND-WORK IN THE ELEMENTARY SCHOOL - - - - IDA HOOD CLARK 164
CORRELATION AND TECHNICAL SEQUENCE - ELIZABETH EUPHROSYNE LANGLEY 169
DESCRIPTION OF THE PLAYHOUSE MADE BY FIRST-GRADE CHILDREN IN THE FRANCIS W. PARKER SCHOOL - - - ROSE PHILLIPS AND GRACE DEWEY 174
THE PARENTS' ASSOCIATION: REPORT OF THE OCTOBER MEETING MRS. FRANK HUGH MONTGOMERY 180
MUSIC - - - - - - - - - - - - - - - - RICHARD STRAUSS 185
Weihnachtslied (Christmas Song).
EDITORIAL NOTES - - - - - - - - - - - WILBUR S. JACKMAN 187
The Mourners; The Real Difference; Teacher Not a Taskmaster; Personal Initiative; The Counter Initiative; Initiative Not Endless Beginnings; Motive; Responsibility.
BOOK REVIEWS:
Young and *Jackson:* The Appleton Arithmetic, E. C. LAVERS, 191; The Ship of State, WILLIAM M. GIFFIN, 192.
BOOKS AND PAMPHLETS RECEIVED - - - - - - - - - - - - 193

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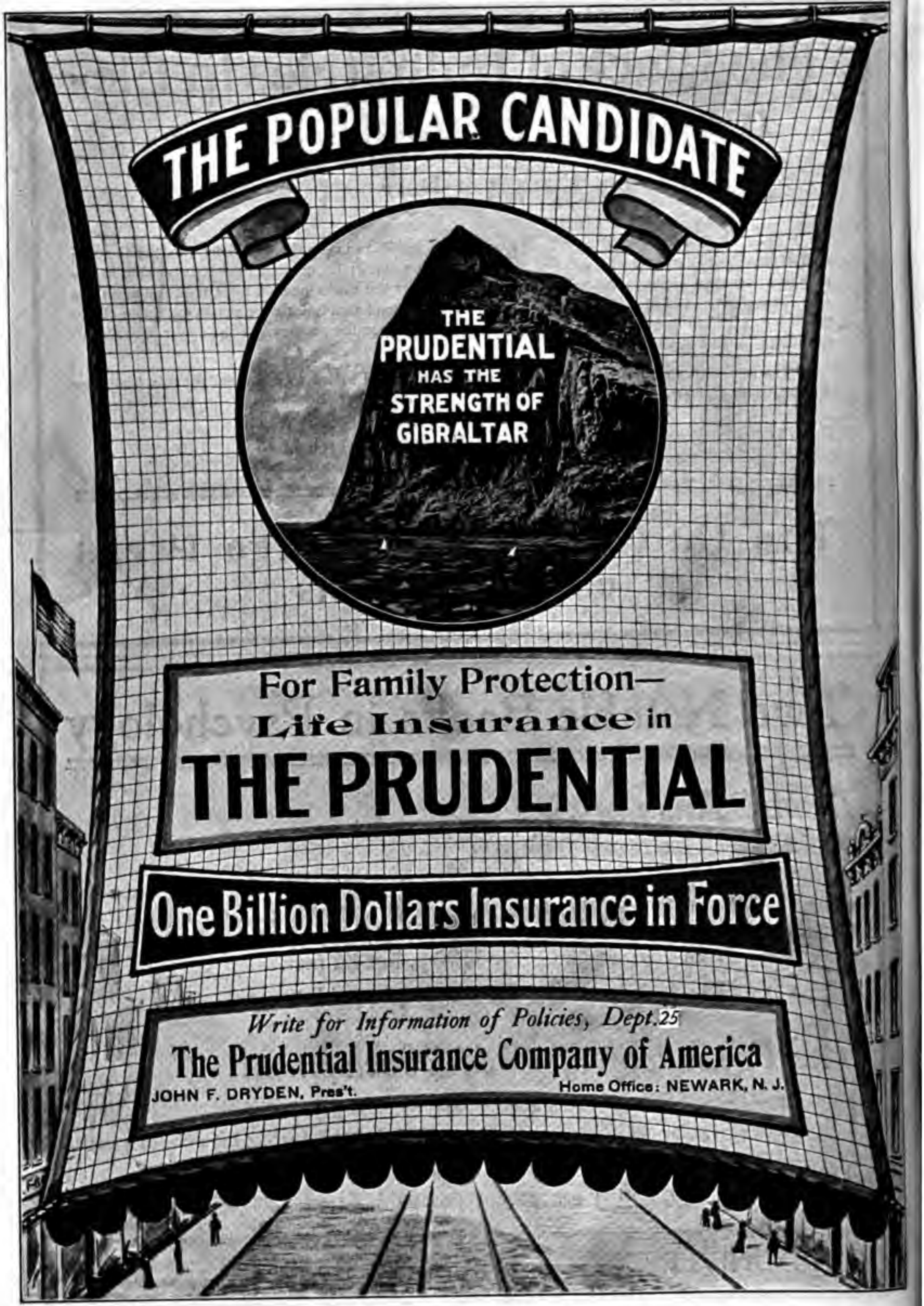

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THE ELEMENTARY SCHOOL TEACHER

VOLUME V NUMBER 3

THE ELEMENTARY SCHOOL TEACHER

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THE VALUE OF PSYCHOLOGY FOR TEACHERS.[1]

M. V. O'SHEA,
THE UNIVERSITY OF WISCONSIN.

I.

CONSIDERING the trend of current opinion, it is probably not necessary to dwell upon the proposition that psychological study of the rational or formal or static or faculty sort cannot be made of much, if any, practical value to the teacher. This seems apparent when we consider what task the teacher must accomplish. Stated in a general way, he must lead his pupils to attain ever more perfect adjustment to their environments. The teacher has to deal with a reactive, dynamic being. He can have no interest in mental processes or forms except as they are concerned in reaction. If it is legitimate for any purpose to view the mind morphologically, it is at least of slight consequence to one who must always deal with mental *function*.

Indeed, I think the teacher may be injured by getting in the way of looking upon mind as anything but a functional organ. I have in my classes sometimes mature students who have had a year or so of formal faculty psychology preparatory to teaching. They have acquired a body of terms which they employ verbally and statically to explain psychological phenomena. Now, these terms get in the way of their looking upon mind as a dynamic agency. If they address themselves to a psychological problem, their attention runs over into their verbal terms, and they really cannot see the reacting individual who is trying to adjust himself to some phase of his environment. Happily, though, the study of formal text-book psychology has very little effect one way or another upon the work of many who pursue it, for it is so remote from the teaching process that the two things will not run together. Such psychology is not any closer to teaching than is astronomy or calculus. It is set off in the teacher's mind in a department by itself, so it does not soak into the teaching system to any appreciable extent.

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[1] An address delivered at the dedication exercises of the School of Education of the University of Chicago, May 13, 1904. From the stenographic report, revised and condensed by the author.

Efficiency in the schoolroom requires first of all that the teacher should be made what I may call "pupil-minded." He must be got into the way of observing how his pupils respond to the situations he presents, and why, and what will secure him most surely and economically the response he wishes. Upon this insight in the teacher depends all success in teaching. The ideal is to make the teacher a naturalist in the human sphere. He must be got, if possible, to see what are the springs of conduct in childhood and youth, and how he can present the stimuli of education so that they may be reacted upon by native impulses and experience in such a way as to correlate the individual ever more closely with his environments. The teacher needs to observe intelligently what happens in the schoolroom; which implies that he must be able to refer particular manifestations to general principles of human nature. Doubtless he gains some of this insight from his every-day contact with people. He could not survive in a social régime if he did not discover and observe some at least of the deepest tendencies of human nature. He may not be able to state what he knows in formal principles, but yet he *feels* that certain traits are common to all men, and he will take due account of them in his attitudes toward people. The one who is most sensitive to these traits of human life — who knows people best, in other words — will, of course, other things being equal, make the best teacher. But with even the most sensitive and cosmopolitan individual there will be subtle principles of human nature — of child-nature, at any rate — of supreme importance in education which he will not appreciate because they have not been involved in the give-and-take relations of every-day life. A man may know how to read well and yet not be a grammarian. So he may see much of sick people and not be a physician. And the principle applies universally. It is a matter of common observation that the very best teachers in general qualities are very dull when it comes to observing the influence of various studies and methods of teaching upon the thought and conduct of their pupils. One may see a good man in some respects teaching a subject like physics in a verbal, mechanical, fruitless fashion, and he keeps on blindly, saying to himself that his pupils are getting good discipline from his work. He has a few formal pedagogical terms infixed in his mind, and these blur his vision for the phenomena occurring right before his eyes. I think this is the type of most cases of bad teaching, and it suggests the supreme need in training which I have suggested—making the individual "pupil-minded."

II.

When it comes to the question of presenting studies, it will be granted, of course, that, since it is the business of the teacher to guide the pupil to perfect his adjustments, he must himself have made the adjustments which he proposes to have his pupil make; that is to say, he must know his subject thoroughly. And I am convinced that if he had mastered it in its historical or evolutionary, as well as merely logical, development, he would gain considerable which would aid him in presenting it to his pupil economically and effectively. Then he could appreciate the main movements which his pupil would be likely to make at various stages in his efforts to assimilate it. He would see that, speaking in popular phrases, the human mind in thinking any special subject will move through it and around it in a characteristic manner. Knowing this, the teacher could anticipate the pupil's difficulties, and he would understand how to help him best to keep to the straight road, or at least to regain it readily whenever he strayed into by-paths. One who could trace out the detailed phylogenetic development of his subject should know something of its psychology from the ontogenetic standpoint.

Any study is, of course, but a branch of psychology in a certain sense; it is a record of the way men have regarded a particular phase of their environment. The point I wish to make is that if the teacher understood the developmental course of physics, *e. g.*, he would have before him a record, more or less clear and distinct, of how the individual would conduct himself in assimilating his subject. He would know how the mind of the race moved around various topics, and why; what experiences led men out of error into truth; what was the stimulus which led to the development of his subject; and so on. With this knowledge he could locate the pupil in all his wanderings, and lead him back to the trail; and he could save him much waste of time and energy by foreseeing his wrong tendencies and guarding against them.

But we are speaking here of an ideal which has probably never been realized in respect of any study. There are immense gaps in our knowledge of what has been the experience of any and all the subjects of instruction, which represent the most successful efforts of the race in adjusting itself to its environments. And this makes it necessary that the teacher should study what is known regarding the way in which the individual mind most readily assimilates these subjects. He must be made to reflect upon the peculiar nature of the difficulties that lie in the route, what equipment the pupil has for surmounting them, and just what kind of help will be of greatest assistance to him. I speak as if this were all understood, which is doubtless not the case; but yet there is something at least already established, and more is being added to our knowledge every day; and the teacher ought to possess himself of so much as is known.

But it is maintained by some that the teacher gains this knowledge without special study. He has been over the course himself; he has it all in his own experience; why cannot he run over the record and gain enlightenment if he needs it? We are told that one who has made an adjustment himself should be able to lead another to make it. But now, there is probably no adult who can go back over his history and recall the detailed steps he took in assimilating arithmetic. These steps have for all practical purposes been obliterated. Mental development proceeds by consolidation of experiences; details of adjusting processes are being constantly merged into general reactive systems, which in time become largely or entirely subconscious. The more perfectly one has made an adjustment, the more difficult it is for him to review the processes by which it was made. The greatest artists often know the least of the *modus operandi* of acquiring their art. This was impressed upon me emphatically in a recent experiment which I made in assigning to two students a thesis on the psychology of arithmetic. One was to work it out by introspection and logical analysis, while the other was to teach it, and observe all that occurred. The first individual produced a formal analysis which failed to take account of perhaps the most vital experiences of the child in mastering this subject. He could not discover many of these experiences from a merely logical treatment of his theme, even when he got what light he could from trying to recall how he learned arithmetic himself.

I do not forget that the text-book in any study plans to present it in the order in which the pupil will most effectively assimilate it. Now, the text is, of course, based upon some sort of conception of developmental psychology in a special field. Without question the book is of great value in instruction. It is the product usually of many generations of observation as to the manner in which the mind of the learner will most easily conquer the subject treated. But, as a matter of fact, the available texts for the most part have been worked out from the adult standpoint in large measure. What we have got, then, is a logical arrangement of the facts of arithmetic, for instance, that we regard as of greatest value. But a sequence of facts in any subject arranged according to their degree of objective complexity may not be the best sequence at all when regarded from the standpoint of the learner. Pedagogical and logical sequences in any field are not necessarily the same.

When it is said that the teacher must track out the course which the learner pursues in assimilating a subject, it is understood, of course, that with experience focal consciousness of the pupil's processes will gradually disappear, and the teacher will handle him appropriately in a more or less subconscious way. As long as the teacher must laboriously follow the movements of his pupil's mind he will be handicapped as an artist. Expert action in teaching, as in other things, must be facile, and in considerable part automatic. Given a situation in his special field, the expert knows without hesitation what is to be done with reference to it. But in the development of this expertness he must first act deliberately; then he must repeat his action often enough so that he may acquire the power of reacting readily and easily. It should be added that the teacher ought not to be made to reflect upon the mechanism of any process which he can perform properly as a matter of suggestion. Automatic action is more effective and safer in all simple situations, if it is rightly adjusted, than reflective action. But in many of the situations in the schoolroom the teacher is not likely to have acquired automatic action of the right sort, and this is why he must be brought to reflect upon what is best to do in these situations. It is probable that much of the work in teaching can never become automatic, because of the variety of minds with which the teacher has to deal, and of the necessity of constant appeal to general principles in the interpretation of special manifestations. If all pupils of a given age reacted in just the same way to every situation in arithmetic, say, one could conceive that after a few years a teacher might be able to teach the subject with as little reflection as he employs in walking or in talking; but no one will grant the assumption. The principle, though, is important, for one may see teachers who are every year growing more expert in the discipline of their pupils and in the teaching of their subjects. Through continued experience they come to *feel* the tendency of different types of minds, and they perceive without calculation what is to be done in the different situations which arise. This, then, must be our ideal—to lead the teacher to study the movements of his pupils' minds just to the extent that this is necessary in order that he may interpret correctly the phenomena of the schoolroom, and to deal most economically and effectively with them.

III.

The teacher ought to make his start in becoming psychologically minded by studying his own experience in order to discover what moves him to action, and what is the method of his attaining adjustment to any situation. In some respects his own experience will be close to that of his pupil. For one thing, he is himself learning during his academic career; and if he can clearly see what happens in his own case, and why and with what results, and what is the line of least resistance in attacking any problem, he will have a basis, at any rate, for understanding his pupil's attitudes, and assisting him to find himself readily. If, for instance, the teacher is beginning a foreign language, and he can discover what steps he must take in order to assimilate it most easily, he will gain some insight into the way in which his pupil will most economically get possession of the mother-tongue. I say he will gain *some* insight; he surely will not gain a complete and correct view, for his own experience will not be precisely like that of his pupil, though viewed *ab extra* they might appear to be so. He is learning the same thing as his pupil; why should not their mental movements be the same? For one reason, because the teacher brings to his study an equipment which his pupil does not possess. He brings not only knowledge which acts in an apperceiving way, but he also brings a tendency of mind which is a generalization of his experience. He has come to regard language more analytically than does his pupil; he has acquired a sort of grammatical sense, too, which his pupil lacks. But if we could lead him to see what he possesses that his pupil does not which makes his present experience different from his pupil's, then we should help him immensely. The teacher needs to get into the habit of asking questions relating to the pupil's stock of experience; he needs to be made *minded* in this direction.

Then, in a broader view, it will be granted that the psychology of the schoolroom is not different in essential principles from the psychology of out-of-doors. The objective situations are, of course, not identical, but the processes in reaction thereupon are undoubtedly the same in principle. The method of the child's assimilating geography in the school is not essentially different from the method of his getting acquainted with the country about his home. The psychology of schoolroom discipline is not different in essence from the psychology of conduct in the home or on the street. And now, if the intending teacher can interpret his own social experience, and see what are the springs of conduct in human nature, and how social action can be most effectively stimulated, he will gain much that will greatly illumine the work of the schoolroom.

While thus granting the value of the teacher's study of his own experience, it should be said that at the same time there is danger of carrying this too far. If he dwells upon it too greatly, it is likely to subtend too large an angle in his vision of his pupil. If he goes too far in introspection, he will come ultimately to see his pupil solely in terms of his own experience. This, of course, is a very simple principle of psychology; what fills our minds often comes gradually to exclude everything else. That which will not fit into what is in our minds is not discerned at all. This is the chief trouble now with most of our educational psychology. But how can we tell just how far to carry the teacher in the work of introspection? In general, I should say that alongside of his introspection from the beginning must go concrete study of his pupil. If either study must suffer, I should say it ought to be introspection. It will result much better to get the teacher into a habit of observing his pupil's reactions rather than his own. If he observes pupils closely enough, he will come to discover certain uniform modes of action, even if he does not have any clear principles of interpretation derived from the study of his own experience. But if his own experience becomes too stable, if it projects itself into the focus of attention whenever he is before his pupils, it will prejudice his action.

It will not be in place here to discuss in any detail the methods of prosecuting the kinds of studies which have been indicated — the study of experience and of the pupil directly. But it may be said, in passing, that what the teacher needs is to get a view as a whole of the pupil's experience as well as of his own. It is of little account for him to pick out some more or less isolated act and study it in detail. If he cannot discover the causes of it, the conditions which have given rise to it, and for what purpose it occurs — if he cannot see it in its *setting,* his knowledge will be of little worth to him. This is to say that, whatever method of study the teacher pursues, he must come finally, at any rate, to conceive of the pupil's mind and life as a unity. But this does not mean that minute analysis is to be avoided altogether. On the contrary, such analysis seems absolutely essential if any success whatever is to be achieved in psychological study. The problem here is no different from what it is in any phase of scientific work. No just conception of the nature of objects or phenomena can be gained from studying them merely in the large, or on the outside. Little progress was made in the natural sciences until the analytic method of study was adopted, and the same appears to be true in the psychological sciences. Simply to look on at very complex phenomena is likely to give either an extremely shallow and unsatisfactory, or else a distorted, view. Under such circumstances one sees with his prejudices, and is likely to miss the really vital characteristics of the thing he studies.

These observations lead up to the proposition that the teacher will be benefited by the method of experimental psychology applied to his special problems. I do not imagine the teacher will gain much from experiments upon the threshold of consciousness, as an instance, but I think he will be greatly benefited by an experimental study on some phase of the learning of language, as a typical example. In this way he will be led to the apprehension of subtle processes which otherwise he would never detect, but which for a correct understanding of his problems he must take account of. To make my remark concrete, take such a study as Mr. Bagley's *Apperception of the Spoken Sentence.* This reveals elementary processes which simple observation would never disclose, but which illumine the whole subject of language-learning, and so of language-teaching.

I do not say that the teacher needs to study experimental psychology as it is presented in any text or conducted in any laboratory today. As a science it deals with much that only very remotely can concern the teacher. But what I urge is that he should know its method, and so much of its results as bear directly upon his tasks in the schoolroom. And these results must relate to the mind as a functional organ. They must concern the individual in his efforts to assimilate himself with some phase of the world. I think the teacher will gain little, if anything, of worth from examining tables showing what is the average number of times a hundred thousand children of any age can tap with a finger or any other bodily member, for instance. Whatever this and similar facts may be worth as items of general information, they certainly are not close enough to the processes of the class-room to throw any light upon them. In a way, doubtless, every psychological fact, and perhaps every other sort of fact, bears some relation, near or remote, to the work of education; but some of these facts are so distant that the teacher can never make the connection. It is true probably that statistical tables and summaries will with some persons determine the validity of principles of human nature, but if the teacher is concerned much with these tables, he will be lost in his figures, and the pupil will move on without his guidance. Or, pending his mathematical computations, he will hinder his pupil in his progress, not being able to get any wisdom from his figures as to the concrete human being before him.

In passing, we may ask whether the teacher is likely to gain anything of value from a study of physiological psychology? It is apparent that in his teaching he is not concerned, directly at any rate, with either the structure of nerve elements or their function. Even if every psychosis is accompanied by a neurosis, it may nevertheless be enough for the teacher to take account only of the former. But this is not to say that mental function could not be made clearer if the teacher knew the outlines at least of cerebral structure and function. To my mind something may be gained by giving current psychological theory a foundation in the architecture and function of the nervous system. It is understood, of course, that in the present stage of our knowledge we cannot say that there is any very detailed correspondence between mental and nervous function, but those who ought to know say that there are certain general correspondences which are well established, and which it would be profitable for the teacher to understand. If it should give him nothing more, it will at least impress upon him the fact that mental action must occur according to certain patterns; its main features, at any rate, are absolutely determined because of the medium through which it must be expressed.

Then when it comes to abnormal manifestations, which the teacher cannot ignore, physiological psychology will prove of considerable value. Mental defects and deficiencies seem inexplicable except on physiological grounds. This is not to say that they are wholly explicable upon any grounds; but they are made reasonably clear by the aid of physiology. In ancient times, before any close connection between mind and brain was thought of, men believed that mental errancy was due to lethargy of will or to demoniacal possession; and all are familiar with the consequences of such views. Now, it is probable that the young teacher will be more or less strongly inclined toward this view, unless his natural tendencies are corrected by some study of the physiological basis of mental defect. Already this study, crude and imperfect as it still is, has illumined some of the dark spots in teaching, and made some children everywhere happier as well as more efficient.

Thus far I have spoken mainly of that phase of school work which relates to the values of subjects of instruction, and the modes of presenting them. But this, after all, is the least important aspect of the teacher's work. The ethical phase is of greater importance. And then, in order to make any headway in his business, the teacher must get his pupil into a positive attitude toward the situations he presents. It is not as though the pupil were unmotivated, waiting for the teacher to apply his stimulus. He may not respond at all when the teacher brings him into an arithmetical situation, for example; and so he gains no ground as a result of his experience, and he may even lose ground. Pupils often have a more or less permanently antagonistic attitude toward the reactions which the teacher desires them to make, and, of course, this defeats the end of teaching. If the teacher cannot appeal to the spontaneous impulses of the pupil, he surely cannot teach him except at tremendous waste. Then the teacher's own personal expressions have much to do with the pupil's attitude toward the thing he teaches. If they arouse antipathy in the pupil, the battle is lost; whereas if they attract him, he will be likely to yield himself to the thing which the teacher presents, even though he is not natively inclined toward it. So it becomes of supreme consequence for the teacher to find out all that is known regarding the experiences which attract, and those which repel, children at different stages in their development. Something of this he will have without any study of the subject; but those who have added to what they have gained incidentally through some study in the spirit of modern evolutionary thought have testified that their study has proved of genuine service. And then consider what is required for the efficient government of the school. What tendencies do pupils of different ages possess which can be utilized in establishing and preserving the school as a social unit? What tendencies do they possess which militate against such organization, and how may these tendencies be transformed or combated? It will be granted that no teacher can achieve success who cannot give a more or less satisfactory answer to these questions, if not in formal statement, then at least in instinctive action.

Without doubt some teachers have been reared under such happy circumstances that they have unconsciously acquired an understanding of the way in which a child will acquire a knowledge of his fellows and a disposition to live in peace with them. One sometimes sees mothers who appear to have instinctive knowledge of these matters, and who are most efficient in their instruction. But, on the other hand, the majority of mothers, as of teachers, are greatly lacking in this respect. Spencer has in an effective way called attention to the shortcomings of the average mother and teacher when it comes to the moral training of the young. And he argues that some study of the natural tendencies of children would be of supreme value to all who had them in charge. If the teacher were familiar with the evolution of social and ethical sentiment in the race, he would perhaps understand in a way the method of social and moral development in the child. He would know how to interpret actions of the individual that had a social or ethical bearing, and he would be capable of aiding him in choosing the straight and narrow path. But the detailed history of social and ethical evolution in the race is not at hand; and what the teacher needs then is to study ethical and social development in the individual so far as it is now known.

Here, perhaps, more than anywhere else there is a demand for a study of the natural tendencies of the individual, and the effect of varied educational forces upon these tendencies.

SCIENCE, GEOGRAPHY, AND MATHEMATICS.[1]

THOMAS M. BALLIET,
DEAN OF SCHOOL OF PEDAGOGY, NEW YORK UNIVERSITY.

THE time is short, and I shall have to be as brief as possible in my remarks.

There are a few suggestions that come to my mind which possibly may be interesting, perhaps helpful, to some of you in regard to the teaching of arithmetic.

I think we often make a mistake in teaching arithmetic, in not distinguishing between the kinds of processes that we are dealing with, and it may be profitable to discuss for a moment what some of these processes are.

There are, in the first place, the number-processes, and many people assume that these are the only ones that we deal with in arithmetic; but arithmetic is broader than number. Let us see what these processes are. They are the four fundamental "rules," as we call them — square root, cube root, and arithmetical and geometrical series; not all of which we should teach in the elementary schools. I cannot this moment think of any other mathematical process in arithmetic, unless you regard the application of the four fundamental rules to fractions as new mathematical processes, as I would not.

Besides these number-processes in arithmetic there is the language of numbers to be taught. All figure work is language work except in so far as it involves the number-processes. The teaching of figures, then, is language work. The Arabic notation is an arbitrary and technical language, very useful indeed, and is an effective means of handling numbers; but nevertheless it is language. Now, as a pedagogical point, we must bear in mind that the methods of teaching language are quite different from the methods of developing a thought-process. You develop a thought-process by leading the pupil to see the facts, and then to analyze them and draw his own conclusions. It is a process of development pure and simple, and in the development of that thought-process good pedagogy requires that we do not tell the pupil anything, but lead him to see the facts, to analyze them, and to draw his own conclusions.

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[1] Discussion of President DAVID FELMLEY'S paper on "The Teaching of Mathematics," at the dedication exercises of the School of Education, The University of Chicago, May 13, 1904.

When you come to language you deal with an arbitrary thing. That you call a cat a cat, and not a dog or something else, is purely arbitrary. To you and me words are not purely arbitrary, because we know the rudiments of philology; but to children they are absolutely so.

When you deal with figures you deal with language, *i. e.,* with the arbitrary. The figure 5 is a purely arbitrary symbol to the child. The Romans used one kind of symbol; the Hindus another, which we have adopted; the Greeks another; and besides these the words for five in the various languages may be used to represent the same thing. A great many teachers imagine that these symbols are actual numbers; that the figure 5, for example, is the abstract number five. They mistake figures for abstract numbers. If the figure 5 is the abstract number five, the word "five" is the abstract number five also, and the word "cat" is an abstract of cat. Abstract ideas cannot be thought except in connection with words, but words are not identical with abstract ideas.

While a thought-process must be developed, and nothing must be told to the pupil except facts where, as in history, he cannot actually observe them, in teaching language you must absolutely tell all, because all is arbitrary; so that at the beginning the process is a question of information, next a question of association of symbol with idea, and thirdly a question of drill. When you have these three things combined and have enlisted the pupil's interest, you have good language-teaching.

These characteristics of good language-teaching are not the characteristics of teaching which aims to develop a thought-process. We must distinguish very sharply between the two. Even the best teachers I know occasionally go wrong in this respect, and teach thought-processes in arithmetic as if they were language lessons.

What part of arithmetic, then, is language work and ought to be taught by the methods appropriate to the teaching of language, in distinction from those to be employed in the development of a mathematical thought-process?

In the first place, the Arabic notation is to be taught as language. In the second place, all the figure work in fractions. A fraction is a part of a thing, and our rules for fractions are not based on real fractions, but on the technical language of fractions. A real fraction, like half a bushel of apples or half an hour, has neither a numerator nor a denominator. These distinctions, on which our rules are based, are applied only to the technical language of fractions. If we should discard the Arabic notation and adopt the Roman, all our rules for fractions would become inapplicable. These rules are of great practical value, but we must recognize the fact that they are based on one arithmetical notation.

In the third place, when you teach decimals you are teaching, of course, simply a certain type of vulgar fractions having multiples of ten for a denominator, so there is absolutely nothing new there but the language. Now, what does that mean, pedagogically? It means that when you come to decimals you are teaching a language lesson, and you ought to teach it by the method by which you would teach French or German, or any other language, and not emphasize the mathematical processes involved, because these the child already knows. It is a question of simply telling him how a decimal is formed, showing him the identity between decimal and common fractions, making the association firm and strong between the decimal language and the ideas, and drilling upon it until he can think readily in this new technical language.

Not to go any farther into details, all technical terms in arithmetic are language. There is, therefore, a large part of arithmetic which is nothing but language, that must be taught by the method of teaching language. When you teach a language lesson in arithmetic like decimals as if it involved new number-processes, you attempt to teach the child what he knows by means of a language which he does not know. The emphasis of the teaching must be laid on the new language, else there is waste.

To pass on: Are there any other topics in arithmetic differing essentially in character from number-processes on the one hand, and from language on the other? Take a problem like this: "If one man can do a piece of work in three days, and another man in four days, how long will it take both of them to do it, working together?" What is the function of such a problem? It seems to me its function is to train the child to see conditions. A similar problem is that of the two boats: "Two boats start at the same place; one sails up the river, another down the river; the current is so many miles an hour; how far apart will they be at the end of so many hours?" What is the function of such a problem? It is to train the mind to picture conditions and reason upon them. Unless you see one boat go up and the other down the river, and keep in mind the velocity of the current, you cannot possibly solve it. The mathematical processes involved are simply the four fundamental rules already familiar to the pupil. Now, unless you teach such a problem by actually showing the conditions, you miss the point to be taught. If you try to work toward a rule and to show that you add the results when the boats go in opposite directions, and subtract if they go in the same direction, you miss all the value of such a problem. There is therefore a topic—formerly called "analysis"—which presents neither new number-processes nor new technical language, whose function it is to develop the power of analysis, and that is one of the important functions of arithmetic. What is the new element which is involved in the various topics which come under what we call "commercial arithmetic"? Take "interest," for example—what new element is involved upon which the teaching must lay the emphasis? Not a mathematical process, because the subject involves only the four fundamental rules. There is a little technical language which must be made familiar to the pupil. What is the new element to be taught? It is the nature of the business transaction which makes the paying of interest a profitable thing. The aim should be to lead the class to imagine circumstances or conditions under which one of them could borrow $100 or $200, keep it for a year or so, and then pay back the sum with 6 per cent. interest and yet make money.

When we take bank discount, what is there specially to be taught? Not mathematics; for there are only the four fundamental rules involved in it. What is the thing to be taught? It is the business operation — the function of a bank as a money-lending institution, and the method of calculating the interest on a loan. Problems should be solved, not for the purpose of securing expertness, but for the purpose of making clear the nature of the business transaction involved in borrowing money at a bank.

When you come to "stocks and bonds," what is the new element to be taught? Again there is no number or mathematical process involved which the children do not know. These topics present a little technical language that is unfamiliar and must be taught, but the burden of the teaching must be to make clear to the class the conditions in industrial and commercial life which make stocks and bonds necessary. It means that the general nature of corporations must be made clear to the class, the nature of stocks and of bonds, the difference between dividends and interest on bonds, the relative safety of stocks and bonds as investments, and the relation between low rate of interest and safety of investment. The fundamental ideas involved in all this can readily be grasped by grammar-school pupils of the upper grades. Little emphasis should be laid on the solving of problems except for the purposes of making clear and impressing the instruction on these various subtopics. "Stocks and bonds" taught in this way have a high practical value for every child; taught as topics in mathematics, with the emphasis on rules and the solution of problems, they are not worthy a place in the curriculum. There is a moral value in teaching these topics as suggested. If in the grammar schools of this country, in the two higher grades, we should impress upon the minds of children the relative degree of safety of stocks and bonds, by making them see clearly the nature of both and their difference, and if we should impress upon them the facts that the higher the rate of interest on bonds, the less safe they are, and that there is also some relation between dividends on stocks and safety; that there are plenty of millionaires throughout the country who are buying up all the stocks and all the bonds which pay a high rate of interest, and are at the same time safe, and that therefore those which pay a high rate of interest and which are glowingly advertised for sale are not safe investments, could the mining sharks in the West and in Boston and New York have fleeced the teachers and working people, as they have within the last two or three years, throughout the whole country, by selling them millions of dollars of worthless stocks?

THE SELECTION OF SCHOOL SONGS.

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THAT music has high value as a school pursuit will hardly be questioned by wide-awake and cultivated teachers. Nor can they fail to remark that this value depends in part on *what* is sung and *how* it is sung. It is with the former point alone that we are here concerned; we must leave undiscussed even the nature of this value — æsthetic, moral, intellectual, and hygienic; for song has a complex effect on the personality.

The selection of songs for school use must be made in view of certain principles, and their discovery is one of the most important problems of musical pedagogy. This problem has but recently received the attention due it from educators and publishers. It needs all the musical and pedagogical ability that can be brought to bear upon it; for, while it is easy to benefit the children in some respects by almost any class of songs, it is also easy to do them injury, as the effects of song are manifold. In fact the practical teacher's sins of commission or of omission in this matter are frequent enough.

When one comes to inquire what the criteria of such selection are, two complementary principles must appear as centrally important. These principles involve a dual conformity: on the one hand, to the actual child of the present; on the other, to the adult of the future, now potential in the child. In other words, one must take account of the child's powers, interests, and needs; yet these must be viewed as dynamic rather than static, and as bringing the child into an indefinite, though real, relation to a standard of taste shared with the adult. Though the child has a nature and lives in a world of his own, different from the nature and world of the adult, still the child-world grows into the adult-world and from the first constitutes a part of the latter. Laws, conventions, and ideals which govern adults must therefore have some, though a much less penetrating, hold upon children. The strict severance, as well as the complete identification, of these two worlds, is a pedagogical extreme. We fail of our duty if we do not consider the child's duty as well as his pleasure; we fail in good taste if we do not lead the child to exercise good taste. The whole idea of education is to develop the future of the individual out of his present, and not to leave him completely satisfied with the present.

Those songs are most beneficial whose interest is most universally shared and whose effects are permanent — songs that appeal alike to child and adult, and unite rather than sever them; songs which the man will recall with pleasure from childhood's days, because they do not clash with his matured interests and tastes. Hence occasional songs, moralizing songs, and songs devoted wholly to school exercises are of but secondary, if any, value; while under most conditions of school work a harmful effect may be traced to cheap, characterless, inartistic music, whether it be weak or quite degrading. The songs to be chosen then are, first, the folk-song, the spontaneous production of some obscure representative of the people; and, second, the artistic or classic song as composed for children, the studied work of trained musicianship. The songs to be avoided are the trash heard in the vaudeville or on the street, and too often in the Sunday school or gospel service—songs popular with the masses, but never long-lived; songs of broad-spread influence, but lacking depth and character.

Melody, rhythm, and verse must be judged in relation both to the pupil's needs and powers and to the standard of taste recognized by musical people. The child's perceptive and vocal powers, powers of appreciation and expression, and stage of intellectual and emotional development are all to be considered. Children's songs must be sane, though idealistic; they must conform to hygienic laws, recognizing the limitations and immaturity of the child's vocal apparatus, and maintaining a balance between over- and under-stimulation of the emotions, neglecting or restraining some interests while leading others to a rich development.

Melodies should be adapted to the child's voice as to both their intervals and their compass. While revealing great individual differences in children, investigations show that at six years of age their power to discriminate tones is less keen than after three years of practice, though semi-tones are usually noted as different. But as sensori-motor co-ordinations are still crude and inaccurate, the power to reproduce or imitate either single tones or intervals falls behind the power to recognize and to discriminate. The average range of the child's natural singing voice is about an octave, running from f to f^1, and is two or three tones higher than that of untrained adults. In selecting school songs, one must not forget that there is more danger of forcing the pupils' voices on the low pitches than on the high. This statement accords with the observation and practice of the best supervisors of today.

The melodies of the earliest songs should be simple rather than complex. This means that they should involve such intervals as are easiest to recognize, appreciate, and reproduce. According to recent æsthetic theory, a simple melody is one in which every tone is directly, melodiously related to every other, as in the bugle-call; complex melody is the result of the interweaving of two melodies based on different tonics in such manner that adjacent tones are not always melodiously related. When the fifth, the third, and the octave are employed in song, then the voice and musical sense may move along lines of least resistance. The simplest songs consist of the elements of a perfect chord, as in arpeggios and bugle-calls. Later there should be added other tones of the five-toned scale, and finally those of the diatonic major scale. Chromatic steps, accidentals, modulations to a second tonic, the finer and more unusual intervals, as involving complex melody and also on physiological grounds, should be elements of only the more advanced songs.

It is true that children differ vastly in musical ability, so that some would be able to cope successfully at six or eight with songs beyond the average child of twelve. Thus inherited predispositions plus musical training and environment are, perhaps more than the physiological peculiarities characteristic of a given age, facts which must determine the kind of melody required. Again, some children have unusual ability to follow and to imitate in any field, or especially in music, though they may have little power of independence or appreciation. But the imitative tendency must not be overworked; such songs must be employed from the start as make possible a pleasant transition from rote-singing to notation and sight-reading. Too much of the young child's imitation of difficult melodies is parrot-like and mechanical, without understanding or warmth of feeling. The intelligent appreciation of complex music needs to be founded on a hearty love of the simplest melodies.

The earliest rhythms employed should be graceful, marked, simple, and regular, such as the child can readily beat out. Regular rhythm involves exact repetition at regular intervals. In irregular rhythm certain complexities are introduced in one phrase which have not their counterpart in any similar phrases. Complex music abounds in such irregular rhythms, which must be carefully distinguished from irregular tempo. Children, like many primitive peoples, naturally demand music bright in tempo, allegro rather than adagio; but within this tempo allegro there cannot be, for music at once simple and effective, much complexity of rhythmic subdivisions.

The reason for these rules is found in the nature of the child's mind: he is less deliberative and more impulsive than the average adult; less capable of sustained attention, of analyzing a presented tonal series into parts differing in their dynamic character, and again of uniting parts thus formed into a unity which means for him one beat or one measure. His memory for and his discrimination of dynamic and temporal values are yet inaccurate; he has not learned easily to substitute four short beats for one long one, or to subordinate two unstressed beats to one stressed beat and feel the accented tone as the symbol of the whole measure. In other words, his rhythmic experience is undeveloped, his rhythmic apperceptive system uncomplicated; what he is to appreciate must be forced upon him by a strong stimulus, and not too much shall be thus presented. Songs must be so selected as to aid in developing the child's vague feeling for rhythm into a definite and analytic comprehension of it and a ready response to weaker rhythmic stimulations. The rhythmic interest is a most prominent feature in all early and primitive music; only through developing and satisfying it can attention be weaned from rhythm and turned more to melody and thought. Finally, the two-rhythm should precede the three-rhythm. The former is the simpler and pleasanter to the child; it corresponds to such bodily rhythms as those of the pulse and walking, with which he first becomes familiar.

The verse should be examined as to its artistic worth and its intellectual and emotional content. Its ideas should not transcend the pupil's understanding completely; it must at least be suggestive of vital experience and meaning to him, though his meaning may not be ours. It should arouse such emotions as conduce to a normal and wholesome human development. It is through the medium of the verse that the song study may be correlated with other school pursuits, such as nature-study, history, literature, and moral-religious training. Its connection with games, gymnastics, and dancing is brought about through the element of rhythm also. As in the modern music-drama song is closely related to the other fine arts, so in the school it may be correlated with any of the other arts, thus borrowing and lending suggestive influence and impressiveness. By a judicious use of this principle of correlation song may gain in interest, power, and vital force. For the young, at least, music should be closely related to life, however much later specialization and maturity of æsthetic standards may tend to isolate it as a unique art, dwelling in a world of its own.

It is not easy to secure all these good qualities conbined, and if one had to choose between the music and the verse, excellence in the former is the more important. If the verse be not pernicious, but too difficult to comprehend, or lacking in beauty and poetic charm, it may still be part of a powerful song. Fine melody tends to obscure the defects of verse and idea; it forgives rather than covers a multitude of sins. The *musical* aim of song dare not be sacrificed. Much of the empty or trashy school music actually in use is due to an attempt to get music which, with the words, can arouse definite namable emotions; that is, the expressive function of music is exalted at the expense of its power to impress through beautiful melody. The child of six has the rudiments of musical taste, and this should be developed through simple but real melody. So far as musical training goes, attempts at correlation are disastrous unless a high standard of melodic values be maintained. Other trash, such as is too common in many religious circles, is due to an ignorant attempt to cater to childish or popular tastes. The result is a bad combination of verse and music, or a mere parody of religious emotion. All beauty may be lost in the effort to secure a "catchy" rhythm or a sentimental melody. It is not true that emotion must be aroused at all costs; rather must it be directed and disciplined by pure art forms.

The trouble with cheap popular songs, whether those of the street, the vaudeville and opera, or the Sunday school, is that they lack strong, unique character. They are not original, but cast in a common mold. As they are all much alike in rhythmic and melodic pattern, sensuous and stimulating rather than intellectual, they demand little effort of attention; past experience aids one to give a ready and complete response; and, easily retained in memory, they are on the lips of everyone when musical scores or performances of worthier music are not at hand. The ease with which many gospel hymns and popular religious solos can and are adapted as dance music argues either to the religious character of the modern dance, or the vulgar, unreligious character of these songs. The verses of the popular song usually agree in character with the music; they are nonsensical, maudlin, or vulgar.

Some readers may feel that our standard is too puristic. Adults who have had good musical training can hear some such stuff without great damage. They either find it unpleasant, or relegate it to its proper place among their mere relaxations, which might just as well be nobler and fuller of delight if they could select a more artistic environment. But to bring children up on this material, to give it any place in the school, prevents the formation of any pure standards of taste in them, and materially obstructs the advance of music in the nation. They will hear enough of it outside school; within school they must be protected from contact with low or impure forms of the art. Even the principle of association must be regarded: songs otherwise good, but which have some unfortunate likeness with street songs, and through melody, rhythm, or verse would patently suggest or recall the popular favorites—such songs may well be avoided. The less imitable and imitative a song is the better it is. Some teachers would banish all love-songs from the school repertoire in a large city because they tend to suggest the treatment given this theme on the street or in the Sunday newspaper. But such a principle can be carried too far; we should not forget that most individuals (though children to a less degree than adults) are capable of taking different attitudes toward the same object; they may regard it in a serious or humorous way, or from a religious or a secular standpoint.

It is by no means heavy music, nor alone that of serious, dignified character, which belongs in the school. Great variety is needed in view of the differing temperaments of the pupils. All need the spice of occasional nonsense; only let it be sensible in music and hold such a place there as does *Alice in Wonderland* in literature—a delight to old and young, fool and philosopher. Humorous songs, such as those of Taubert, can be found which are refined, delicate, and classic. Light music should have a large place in the child's life. The rhythms which in the vulgar song are so marked and prominent may be toned down and overshadowed by melody and harmony of fine character; these now claim more attention, and the response is no longer called forth mainly by the rhythmic, sensuous, physical aspect of the music. There is good, classic dance music. While different rhythms have various effects, to lull or stimulate, it may be doubted whether any rhythm is bad in itself. Whether one rhythm shall incite a person to dance the two-step, or to march with military fervor, or to listen merely, depends on its usual association in the social group, and on the temperament and experience of the hearer; whether another rhythm shall lull one to sleep, or to languid, sensuous intoxication by imagery worthy or unworthy, depends on the same conditions. "Rag-time" is to be avoided because of its vulgar origin and associations. The two-step rhythm, under social conditions now commonly present, may be degrading to taste or morals if used in excess; it first arouses one's animal spirits, putting vitality into the motor play of the body, and subduing all to its own regular form; but this natural vivacity, aroused and augmented by the rhythmic stimulus, may throw away its restraint and become chaotic, anarchic. Artistic form first arouses the impulse, but impulse later transcends and spurns this form.

Whether or not it is best to adapt standard songs to children's use is a nice question. If a great work of art, the song must express one sentiment which all its elements help to maintain. In that case any alteration may diminish the significant proportion of its parts. While art as a whole is fluent and progressive, ever becoming embodied in new forms, its individual creations may be regarded as fixed and finished. There is little reason, however, for putting music on a different footing from the other arts. Myths, fairy-tales, and great literary creations have been adapted more or less successfully for children. The tales of Lamb and Hawthorne, the expurgated *Gulliver* and *Arabian Nights,* are justified. Primary reading-books do well to owe their allegiance, through adaptations, to the rich stores of ancient story. To arrange music written for orchestra or chorus for pianola or organ, and so multiply the opportunity for listening lessons, in spite of the loss entailed, has its pedagogic advantages.

From the same point of view we would say that if the words of a good song are unfit for school use, they may be slightly changed, or new verses selected provided these accord with the mood inherent in the music. Translations of foreign songs are justified because inevitable, unless we confine ourselves to the songs of English-speaking peoples. The melodies of old songs are often very simple, with the exception of a few connective tones whose melodic relations are less intimate or which introduce temporary modulations. Such tones may be regarded as beautifying ornaments, without which the song assumes a plainer character, though unmarred in its essential beauty. These tones might be slighted, omitted, or changed to the pitch of an adjacent tone in many cases, thus simplifying the melody. Some songs may be utilized by omitting a second theme or development when only the first is simple enough.

It must be added that there is, in fact, too much rather than too little adaptation in music collections, and that most of it is controlled neither by pedagogical knowledge nor by musical taste. Most editors, teachers, and supervisors in the schools should beware of this expedient, which is not the function appertaining to novices, but to skilled musicians. Great composers have used folk-songs as their material freely; and occasionally our practical teachers and editors have the skill and artistic conscience fitting them to adapt as well as to select music for school use. Finally, the principle of association must not be unduly magnified at this point: that the connection between given music and words is an old familiar one is not sufficient reason for censuring any change. Other beautiful arrangements may be found. Our æsthetic preferences are to be justified by principles; the mere fact of fondness for a particular object is not its own justification.

Those songs are emotionally wholesome which stimulate the pupil's love of nature, home, God, and fatherland. But the development of an exclusive patriotism which feeds on ill-will toward other nations is no more desirable than that of a fanatical or too sectarian religion. This is especially true in our country to whose people's life, traditions, and art so many existing nations have contributed. Our schools represent a mixed race; hence not a narrow patriotism, but a broad sympathy with a variety of national and folk-songs, is demanded. It does not devolve upon educators to transform every grand foreign song until it breathes a distinctively American spirit. Were we to favor German classic and folk music, even at the expense of some of our own, we should be the better for it.

Special emphasis should be laid upon the value of the old music for school use: old hymns, ballads, and lyrics, old national airs and folk-tunes, as well as the works of classical composers.

The school should be first of all a conservative force in this field. While song composition by pupils has the decided advantage of fostering the creative spirit and intensifying their interest in music, to make unstinted use of these productions as song material would be detrimental to musical taste. All beginners need the richest possible experience of the best that the art affords. Folk-songs are of immense value because they spring from the heart of the people and express, not a private, but a universal, feeling. They have stood the test of true popularity. To gain their inspiration is to get into closer touch with living humanity. Some think to find in these national songs a revelation of national characteristics. Certain it is that melody and words together may be very expressive, and thus form good historical material.

There can hardly be a valid objection to the general school use of folk-songs, unless it be the frequency with which these express the passion of love. But granting this, still among the large remnant which are not love-songs many may be useful. Distinctions also are to be drawn among love-songs. The erotic and excitable are to be avoided; but there is no harm — indeed there may be much good — to the child in songs that are pure and simple and express those feelings which are common to friendship, family affection, and sexual love. To those ballads which are somber in tone and full of emotional contrasts, of passion, jealousy, fidelity and infidelity, are to be preferred such lyrics as are joyous, full of life, and more serene. A good love-song may well replace a bad street song in the child's repertoire.

There have been made a few empirical studies, which cannot be reviewed here, of children's preferences and interests in music. Such studies indicate the topic or type of the preferred songs, with particular reference to the verses and their dominant sentiment. They deal with masses of children, and obtain statistical results. The investigators are not always trained musicians, and the data they present are too often insufficient to determine whether, for example, the patriotic songs which boys like are worthy or cheap; they indicate only the general lines of interest, the kind of sentiment which music should appeal to. Or where preference for particular songs is evidenced, we do not know whether this is to be traced more to the child's disposition or to the limitations or advantages of his experience and instruction. Hence such a study cannot indicate the merits of particular songs for school use; that is to be determined by our developed musical ideals as applied to what child-study teaches us of the types of children's interests for different ages and sexes. Sometimes the interests less frequently or strongly exhibited are the very ones needing special stimulation. Perhaps the greatest lesson such studies can teach us is the need for a variety of song material to satisfy the diversity of needs exhibited and to develop all these possibilities of a richer, more significant life.

TECHNIQUE IN ELEMENTARY MANUAL TRAINING.

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WITHOUT doubt there is no one stronger influence at work today upon educational methods than is brought together under the general and indefinite name "manual training." It is not strange that a visitor at the St. Louis educational exhibits should have a doubt, as far as visible evidence is concerned, as to the accomplishment of other school work than manual training.

Even admitting the truth of this visible evidence, the real educational significance can be shown only imperfectly in an exhibition, and as we individually feel the large part which "doing" plays in the progress of life, we see the real need for so large a representation in the school curriculum.

While it is no concern of the present moment to lay stress on the shortcomings of early attempts, we can truthfully express sincere thanks for even a Russian beginning. It is devoutly to be wished, however, that a term more expressive of present objectives than is commonly implied in "manual training" might steal into common usage.

It was not strange that we first gave tools to children who could use tools with a fair degree of success, for we have so large an appreciation of our "practical" methods of living, not alone without, but within school walls. So we must not wonder that, to start with, high schools received the benefits of construction work, if, indeed, such a term could be applied to the first work done.

The growth of manual training has taken place in a rather unnatural way, in thus taking root in the upper strata of school work, and finally coming to the blossoming stage at the very foundations of all school work.

Courses have been made over and handed down to lower grades, not unlike the manner in which small boys sometimes fall heir to the clothing of their larger brothers. Course after course, even as suit after suit, is made to do for successive generations in the school world. In discussions among school workers we do not hear, or at least the writer does not hear, the problem attacked from the point of view of the elementary school itself. Perhaps it is not strange, since throughout all school work so unproportionate an amount of means and interest are centered in the superstructure. Without doubt there is an awakening in progress, which shall draw unto the first-graders more of their own.

Construction work under the name of manual training is already strongly intrenched in the elementary grades, but, so far as having a philosophic foundation is concerned, it has come to be more by a process of imitation of activities suited to higher grades than by a real need and true application of work suited to its own life. It must be clearly evident to one sympathetic with child-life that a set course of exercises does not reach the needs of a restless child whose chief concern is to gain some idea as to the meaning of the complex life about him. To be sure, there is a physical organism at work, but there is hardly enough center to it to be satisfied with, or even to get much good from, any form of activity which has for its purpose the accomplishment of results other than can come within the child's own experience and appreciation. We cannot tempt these small muscles into accurate work, or the semblance of accurate work, wholly without the worker's choice. Somewhere between that kind of school activity called "busy work" and a more rigid or set form of occupation lies the true manual training for elementary grades; and for practical application in the common run of schools, where dependence for execution has to be made upon the regular teacher of the grade, it seems that work of such a character is most readily adopted.

With the conditions of ordinary elementary grades, it seems almost needless to have in mind such a word as "technique," and it is to be doubted if we should, had the beginnings of manual training been freer from a severely practical or commercial bias.

Having in mind the boy of six or seven who is just beginning to emerge from his infant bondage, it is especially hard to see in him any natural adaptability to occupations which would involve technical and mechanical processes, or that could even be implied as technical. So my argument is not so strong against as is it alert in running away "where no man pursueth."

Human sympathy founded in a desire for a healthful, robust physical machine would naturally help us to avoid such forms as would tend to the use of small muscles or the development of ideas not directly serviceable in the life of children.

If the term is forced upon us and we *must* be technical, then let us search thoroughly the conditions of child-life and make the endeavor to have our efforts count for the most in building up strong, powerful tendencies that shall come in good stead as life progresses.

Opportunities come to the teacher in elementary grades to give work which will call out the greatest amount of individuality regardless of process or the tools involved. There will always be the opportunity to call tools and materials by proper names, and even this little would accrue to no mean advantage by the time higher grades are reached.

Emphasis could well be laid on this one idea, but it should not be construed as an objection to take the place of work involving ideas of wholes or correct mental images, which are results quite sufficient at this time, and will turn out to be the best kind of seed planted for more technical results later on.

In order to give children of these lowest grades an opportunity to practice the right kind of technique, I should want a room for their own use, and equipment would grow as demands were made by the workers themselves. I have the fear that my room would hardly be recognizable as a shop, but it would be a place of all kinds of materials and a place in which all kinds of spontaneous ideas would have a chance to take such definite form as children would give. Evidently there would be but little need of dictation in a shop of this kind.

Two very strong personal experiences make me believe in giving to children of elementary grades more opportunity for individual expression than is their privilege in rooms where rows of seats and desks are the traditional forms of furniture. First, I can bring back from boyhood days the memory of the great delight of happy times spent in ransacking the remote, dark corners of an old garret. To be found there were odd pieces of furniture, boxes, old clothing, and in fact all manner of traps and findings that go to fill one of these resourceful places. How keen was the delight in making old chairs do service as four-in-hands, and again these same chairs could stretch out into long trains of cars with no important feature missing. Old boxes and boards would at one time serve as a store, while at another they would become transformed into buildings and railroad stations.

Another object-lesson came to me in the neighborhood of a social settlement. The city had provided a playground; old buildings were removed, and in their stead came a smoothly covered cinder lot with a flag-pole and a few seats. Close by this so-called playground was one which the neighborhood inadvertently provided. Not a flag-pole was here, nor seats, but everything that a civilized people discards and casts upon a city dump. There were children here always; after school and during school one could see little groups of "workers" building such castles as fancy and old bricks can fashion. In fact, constructive play ran rampant, and everything immediately essential to vivid imagination was here. The mere absence of a few technical details made no difference in the construction of these "imitation" houses. What a golden opportunity to impress a social faithfulness to the "technique" of right living!

It is undoubtedly the place of the school to take a hand in giving to children opportunity to work off emotional enthusiasm, and it becomes more necessary for them to have this opportunity to give motor expression to this busy work which surrounds them, as cities become more crowded, and the act of living becomes confined to smaller spots; and, as I write this, it is impossible to refrain from the thoughts of those forlorn and ghostly places generally provided for play purposes in the basements of ordinary schools. What possibilities of usefulness even in the adaptation of the underground regions to the real play-needs of children!

In a general way I have tried to show the need of giving children in the elementary grades opportunity to give expression

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at help us to become better workmen because of the ability
o control ourselves in the midst of other workers. Each
of child-development yields its own peculiar contribution
complete art of living, and in the elementary grades it
opportune to emphasize the technique of social responsi-
It is noticeable in schools where manual training of ordi-
pe is first introduced in the seventh and eighth grades that
ldren do not at first understand their suddenly acquired
n. Consequently, if some idea of this social responsibility
al freedom can be gained in the elementary play-shop, we
to have a child better able to handle himself and express
in the technique of tool manipulation in the higher

HAND-WORK IN THE ELEMENTARY SCHOOL.

IDA HOOD CLARK,
SUPERVISOR OF MANUAL TRAINING, MILWAUKEE PUBLIC SCHOOLS.

PERHAPS the most important problem that confronts the educational world of today is just what shall be taught in the elementary schools where the greatest number of our children are trained.

Up to the past few years the kindergarten has been the only natural school. Many of us have been under the impression that child-nature utterly changed upon entering the first grade; so the natural activities were promptly discontinued and the dreary, mechanical processes for the education of these young children as promptly begun, teachers in these primary grades teaching with infinite patience, many things the children would have found out for themselves a year or so later. But now the spirit of Froebel is penetrating this waste desert of the elementary school, and changes are coming into schools of every grade. So the kindergarten methods have won their places, and wood, chalk, clay, scissors, tools, etc., are in use to make young fingers deft.

These changes began at the top of our educational system and are fast working downward. All these new buildings which have appeared of late in all our thriving colleges and universities — these workrooms and laboratories — show that a liberal education means skill in getting and using knowledge; that wisdom comes from searching books and searching nature; that in the finest human natures the brain and the hand are in close league.

The future of hand-work or self-expression is the future of all elementary education. It may be called the entering wedge to the new American development.

Arnold has said: "Religion is morality touched with emotion." We might say that the kindergarten is activity touched with sentiment, but self-directed to be of educational value. Creation is said to be the highest activity of the mind; so the child who is trained to create is trained to think, to explore all the questions of the past and the present. These single creations in the kindergarten and primary school, crude as they usually are, but expressing the individuality of the child who made them, mean opening the way into personal freedom, as self-expression is the essential element of liberty.

Froebel believed that the three primal race-occupations—weaving for clothing, planting for food, and building for shelter—were necessary for normal development. May we not make these occupations, and the activities connected with them, a basis through which we may bring the children to a better understanding of the other subjects contained in the school curriculum?

In this article I shall try to touch upon some of the vital questions which present themselves in the teaching of this hand-work in our public schools, where we are hampered by too many pupils for one teacher and an overcrowded course of study. As the present course of study is arranged in the average public school, it is impossible to do very much more than merely to teach some form of hand-work in each grade; but even in its isolated form it is sure to appeal to those most interested in such a way that later the educational value may be easily demonstrated.

But this hand-work can never be a thing in itself; it must be a part of the whole and every teacher must have something to do with it, as it is only when it fits into a general scheme that it becomes valuable and educational. Therefore I think the supervisors of primary work, drawing, and manual training, should plan a course of study for the elementary school. These three persons must then work together with the assistance and co-operation of the grade teachers, and I feel sure that the best results will follow.

It is impossible for us to do this all at once, or to fashion an iron-clad course of study; but it is the duty of every teacher to accept what is commonly called truth in modern pedagogy, and then each one must work out the scheme that will best fit his own particular field. I would suggest here that a plan for correlation of subjects be tried in one building, and the results carefully noted and demonstrated.

Another question of great importance is: Should boys and girls have the same kind of hand-work? Pedagogically speaking, I do not see any good reason why boys and girls should not all have the same kind of hand-work; but with the present course of study it seems advisable to give the children of the first four grades a variety of hand-work of the same kind for boys and girls — a variety that shall cover the range of young children's interest and bring them in contact with many materials and processes. The girls of the fifth and sixth grades may sew and do some work in designing and making baskets. The boys of the fifth and sixth grades also take the basketry-work and do the knife-work in thin woods. Some work in Venetian iron-work may also be brought in in these grades.

I do not consider the above work, as outlined for the boys of the fifth and sixth grades, sufficient to develop their resistive powers. I believe they can do much more, and that tool-work should be at least a part of their work in manual training. But here again the public-school problem faces us. The work in the first six grades is usually and necessarily done in the regular schoolroom. I look forward to the time when all our school buildings shall contain reasonably well-equipped shops and laboratories in which to teach these activities, as they are related to the course of study. Then our hand-work need not be confined to certain grades.

I am planning now to have the boys in the fifth and sixth grades make a simple equipment, such as benches, cabinets, etc.; and where the buildings have an extra room that may be used, we hope gradually to fit up a crude shop where the work of these grades may be done. The boys will learn many valuable lessons in fitting up these shops, and, besides learning that a great deal can be done with a simple equipment, when they get to the seventh- and eighth-grade shops, where a complete equipment is furnished because here more technique is essential, they will fully appreciate the value of the more elaborate equipment.

The girls of the seventh and eighth grades take domestic science.

If we could have more time and money for these grades, I should strongly urge that boys and girls of these grades take both shop-work and domestic science; as in the interest of an all-around culture, as well as an intelligent understanding of the human body and its physical nourishment and development, it is so essential that the pupils of this age be given these forms of manual training.

In the wood-work of these grades, we have a fine opportunity to cultivate in these pupils a love for trees, woods, and furniture of different countries. Much of their history may consist of comparisons of these subjects.

Then, too, the principle of service may be brought in. Let the children make some article that mother and father will use and value. The sentiment thus interwoven is not an idle one. It is said that all the great and beautiful things made and done in the world—the great pictures, symphonies, poems, stories, buildings that have needed the human spirit—were done as a result of sentiment—the sentiment of hope and love.

Visitors to the Palace of Education and Social Economy at the World's Fair may be interested in studying the exhibits of a few schools, where it seemed to me correlation of subjects had been emphasized. Papers containing illustrated work in school gardening and nature-study done in the Hyannis State Normal School, in Massachussetts, were most interesting. A scheme for elementary geography, nature-study, and literature, based upon some related activities, as illustrated and done by the children of the public schools of Salt Lake City, Utah, was very suggestive and showed excellent results. A historical rug, designed, planned, and woven by the students of the Utah State Normal School, at Salt Lake City, representing the history of the development of the state, and made for a present for the president of the school, told the story of the unified plan for the correlation of subjects as being worked out by these progressive people with admirable results.

I found the written work of the public schools of St. Louis quite in harmony with the idea of correlation, although they have not as yet attempted to emphasize the relation of their constructive work to the other subjects in their curriculum. The constructive work of the kindergartens of Louisville, Ky., seemed to me the most practical and educational I have seen.

The correlation of art and manual training was very marked in the high-school exhibits of St. Paul and Minneapolis, some beautiful and artistic work being shown.

I believe many cities are alive to the fact that related work is necessary; but just how it shall be done has not as yet been proved to their satisfaction.

To do much toward the reconstruction of our course of study, we shall need to omit two classes of study altogether to make room for better things. We must omit, first, those subjects that are abstract; and, secondly, those that are involved in other subjects. We should then have left the speaking, reading, writing of English, and of either French or German, science and freehand drawing, physical culture, including sports of all kinds, music and dramatic expression. Basing all these on the related activities, it seems to me we shall be able to produce vigorous bodies and warm hearts, as well as informed minds.

Our country is waking up to the necessity of a change in our methods of instruction in public schools. Let us as teachers be the leaders in the movement which shall give us larger school buildings, ampler playgrounds, summer-vacation schools, a gymnasium in every school building, less pupils for one teacher, salaries that shall attract the best talent our colleges and universities afford — teachers whose inspiration is the love of little children and interest in their development into all-around good citizens — the object of all education.

CORRELATION AND TECHNICAL SEQUENCE.

ELIZABETH EUPHROSYNE LANGLEY,
THE UNIVERSITY OF CHICAGO SCHOOL OF EDUCATION.

Is technical sequence interfered with by the practical application of the principles of correlation? This is a question often asked, and usually with the implication that correlation and technical sequence are in their nature opposed.

The term "correlation" has come by misuse to imply so much of sentimentality and personal idiosyncrasy that it can be used only guardedly and with full definition. To the untrained teacher grasping after new ideas the word "correlation" seems to mean a haphazard throwing together of ideas presumably related — a method whereby the work of each day determines the work of the next day, with no reference to any larger plan. The uninitiated teacher who, with a few hours at her disposal, endeavors to gain from a school of so-called advanced pedagogical ideas some practical conception of the magical word "correlation," watches teacher and pupil, and wonders by what necromancy or inside information or expert mind-reading the teacher knows just the psychical moment in the child's mind when reading should give way to clay-modeling, and clay-modeling, in its turn, to mathematics. I am quite sure that the only definite ideas this visitor takes away are, that correlation is only a happy alternation of mental and manual labor, and that the child's will rules.

Correlation cannot, however, be so lightly dismissed. True correlation is an interrelation of subject-matter from the standpoint of education. It endeavors to find out the essential kinship of certain portions of the subject-matter in the curriculum, but the chief attention is focused on the child, so that these related materials may be properly adjusted to the various periods of his development. The scheme is planned to keep pace with his growing powers, and it allows great freedom and flexibility to meet individual needs. True correlation thinks of the child as the center, and endeavors to bring him into touch with the greatest possible number of the forces that work about him. The endeavor is to make the child alert to these forces, and, so far as may be, himself to manipulate some of them. Correlation is not, then, a method of teaching by inspiration, a method depending on the happy instinct of the moment, but it is an ordered scheme. It implies definite, coherent, systematic, well-knit plans; in a word, it means organization.

"Technique" is only another name for the skill requisite to produce workmanlike results. Sequence of technique in woodworking is the arrangement of articles to be made in such an order that any given process shall succeed processes of less difficulty. Technique as an aim and technical sequence as a demand find their best illustration in the Russian system which puts its stress on processes as such rather than on completed articles. According to the Russian ideal, good technique is its own reward for being. The acquirement of technique is an isolated thing; it considers itself alone; its aim is single. If fine adjustment of tool to material results in an excellent series of exercises, its purpose is attained. Its plans are definite and unvarying.

Now, it would seem that a scheme so rigid and inflexible in its methods, so single and dominant in its aim, could not be perfectly conserved, and yet fit into a scheme so pliant and so complex and so sensitive to varying needs as is correlation. But the whole statement is based on a false assumption, namely, that only by a rigid attention to technique for its own sake can a high degree of technical skill be obtained. Experience, however, shows that only now and then is there a child that can be roused to do the best that is in him by the appeal of pure technique. Such an appeal is intellectual in its nature and belongs to a later stage of development. The child's best workmanship, even when judged by purely technical tests of excellence, follows in the line of his keenest interest. If a task is set for a boy by the teacher, from the point of view of the teacher, it becomes to the boy merely an exercise, and therefore a bore. To take the simplest possible illustration: a child may be taught to saw and plane and chisel till he knows how to saw and plane and chisel, and it can all be done on pieces of wood that are thrown away when the exercises are learned. But he will learn these operations, not only with more happiness by the way, but also more quickly and accurately, if he is compelled to do the tool-work well in order to complete a sled or a house, or any article in which he has particular delight and which will be a permanent possession. Even a series of models planned by the teacher and imitated by the child is too rigid and artificial. The child *imitates* rather than *creates,* and this fact alone greatly lessens the educational efficiency of the system. It is unbelievable that the interest of a body of children should follow a series of models as it would follow articles of individual selection. For example, when it comes to making rulers, two children may have some especial interest in that model, but to the rest of the class it is an exercise. And I must insist that the quickest road to good workmanship is the road of interest.

One caution is undoubtedly needed here. Rousing the child's interest by giving him freedom of selection in the article to be made does not imply absolute lack of direction. It is the province of the teacher to see that whatever the child chooses to make he makes well. Hasty, shabby, dishonest work is non-educational, and should not be allowed. But, as a rule, when the child once feels, not only the freedom, but the responsibility, of his choice, he puts his best and most eager and persistent effort into it, and secures the best results possible to him.

What has so far been said is that excellence of technique follows most easily and naturally and certainly along the path of interest. Now, no scheme of education has been devised whereby the interest on the part of the children is so general, so sustained, and so fruitful as in correlation. The idea of correlation is not that the child is preparing for life, but that he *is* living, and the aim is to surround him with natural conditions, and then watch and direct him as he develops under these conditions. The way in which correlation stimulates interest in the special departments of hand-work may be illustrated by a single example drawn from the work of the first grade.

The development of the home was the center of thought and work for one year. The special teacher of wood-work planned with the children and the grade teacher the kind of house which should be made. The children decided upon its shape and approximate size. All of the time allowed for special work was spent in the wood-working department until the house was finally put together. Then the children wished to furnish it. The making of designs for wall paper, for rugs, and for furniture came next in order. Here was the need for drawing, and that subject now occupied all the periods set apart for special work. But the drawing teacher worked in full co-operation with the grade teacher and with the special teachers who would hereafter aid in carrying out the plans. In the making of these designs full opportunity was given for inventiveness in form and color. The only suggestions given the children came through samples of artistic wall paper hung about the grade room, without comment. When the designs were ready, the children began the weaving of rugs in the various materials of their individual choice, and the painting of their wall paper. Later they returned to the wood-working room for the construction of their furniture.[1] Thus the time set apart for special work was divided among three departments — drawing, wood-working, and weaving — but all under the control of the central idea emanating from the grade room. The interest was cumulative. Each new day added to the interest of the day before. The children wove rugs, painted wall paper, built houses, and made furniture with unflagging zeal, surprising energy, and with results of workmanship amazing for children six or seven years of age. Each completed house, neatly painted on the outside, with stairs and an attic, and a full complement of doors and windows, with stained floors and flowered walls, with rugs and curtains, with chairs, tables, and settles, meant more to its owner, its *maker,* than any house that could belong to him in later life. It was a concrete embodiment of his thinking and doing for a year. He had thought of something, he had made it, he could look at it, he could keep it. In the process of making, his fund of knowledge had been largely increased, his powers of observation quickened, and, further, his skill in hand-work in three directions had been, by the way and incidentally, as it were, but most really, increased more than it could have been had the whole attention been put upon the hand-work apart from the correlated idea.

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[1] The plan had been for the children to make this furniture in cardboard, but they objected, saying they wanted wood because that would last.

What I have tried to say is that correlation in the elementary school does not only not interfere with technique, but that through the avenues of interest it results in a technique of superior quality. And I have meant to imply that correlation is a larger thing than technique, and that it also has many features of great educational value not thought of in any system where technique is pursued for its own sake.

DESCRIPTION OF THE PLAYHOUSE MADE BY FIRST-GRADE CHILDREN IN THE FRANCIS W. PARKER SCHOOL.

ROSE PHILLIPS AND GRACE DEWEY,
TEACHERS.

THE work in history, manual training, and applied arts, based on the children's interest and experience in the home and its activities, centered around the making and furnishing of a doll-house for the kindergarten.

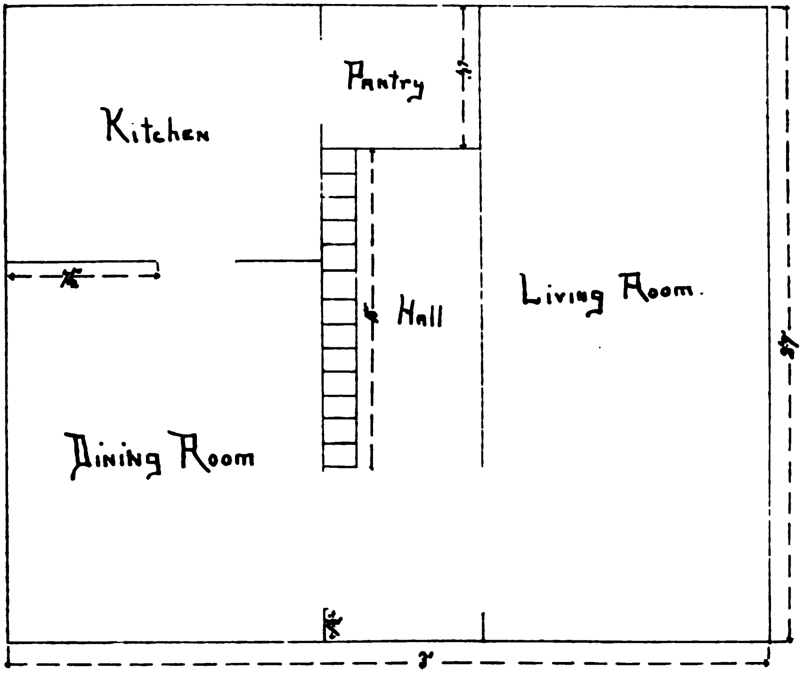


FIG. 1.—Plan of first floor.

During the process of construction frequent comparisons were made with the homes of the children, and the simple homes of primitive peoples.

Attention to the arrangement of rooms in the school building

PLATE II.

A

B.

C.

enabled the children to draw plans of one floor. Each drew also a plan of one floor in his own home. Individual plans for the dollhouse were then made, which were very unpractical in the number and arrangement of rooms. Criticism by the children and teachers led finally to the simple plan illustrated in Figs. 1 and 2.

A dry-goods box 3′ long, 2′ 7″ wide, and 2′ 8″ high was secured for the outside construction (see Plate II, A). The length of this was measured by the children, and planed poplar boards approximating the length were given them, to make ready for flooring. The lower floor was laid by them, the upper one being placed without their assistance.

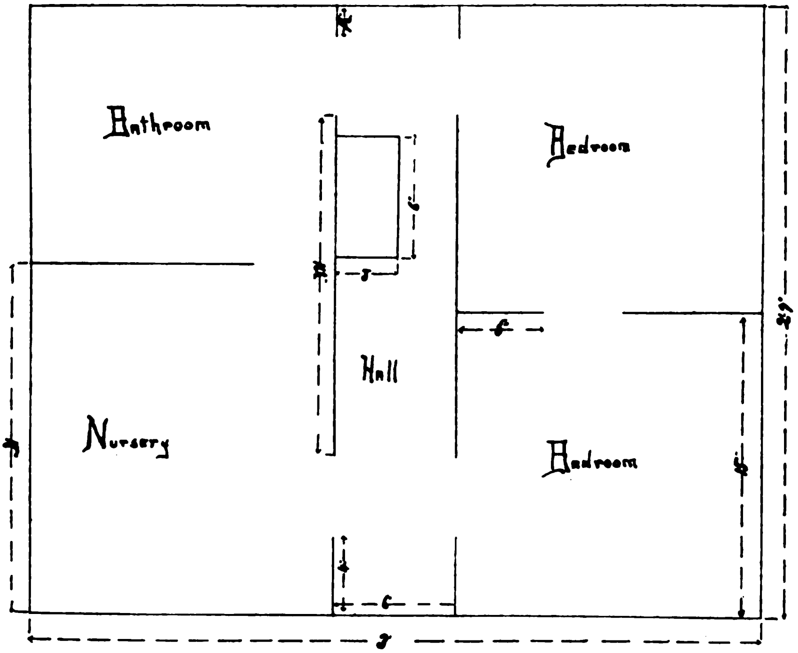


FIG. 2.—Plan of second floor.

The wall partitions having been made ready in the same way, a variety of opinions was expressed as to size and location of doorways, the children often referring to the comfort of expected inmates. The boards were cut to admit of these spaces before being placed.

The furniture-making gave much pleasure. After a talk on the necessity of strength and good appearance, the children offered their plans for a chair—with no suggestion of either of the above qualities in them. These plans were willingly discarded when a chair was shown made in the following way (Fig. 3):

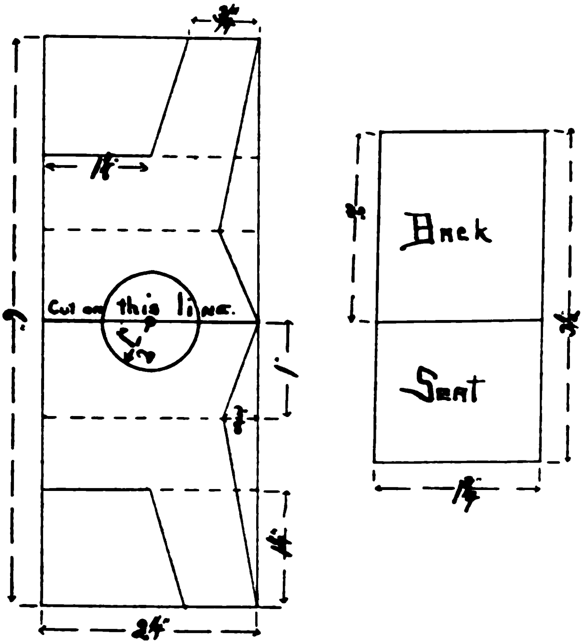


FIG. 3.—Chair. (Stock, one-fourth inch whitewood.)

Plans for such chairs were then made on paper from the following written directions:

Draw a rectangle 6 inches long and 2½ inches wide.
Draw a line across the center.
Draw a line 1 inch above the center.
Draw a line 1¾ inches above the center.
Put a dot in the middle of the center line.
Put a dot on the line above ⅜ of an inch from the edge.
Put a dot on the next line above 1⅛ inches from the same edge.
Put a dot on the top line ¾ of an inch from the same edge.

By connecting these dots, as seen in the drawing above (Fig. 3), one side of the chair was drawn. The other half of the rectangle was used for the second side of the chair. This drawing was again made on the rectangle of wood.

Directions were given in a similar way for all the furniture. The bedsteads were made from the following plan (Fig. 4):

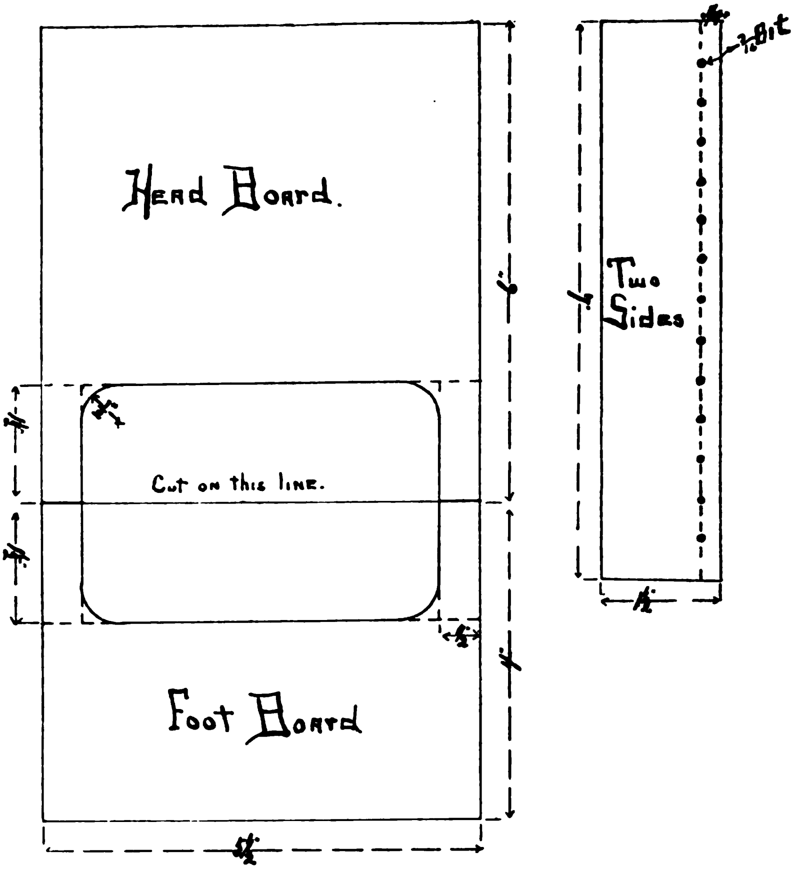


FIG. 4.—Bedstead. (Stock, three-eighths inch whitewood.)

The dining-room and living-room tables are made on the same plan, except for the round top of the dining-room table (Fig. 5).

Kitchen and pantry cupboards were made from chalk-boxes cut to the proper size, shelves being added. A swing-seat, see-saw, and sand-box for the attic playroom were also made.

Stair-steps 1½ inches wide were cut, and placed in step-ladder fashion, as follows (Fig. 6).

After measuring the walls of the rooms, the position and size of the windows were determined. Openings were made with augur and saw, and the glass was held in place with frames inside and out.

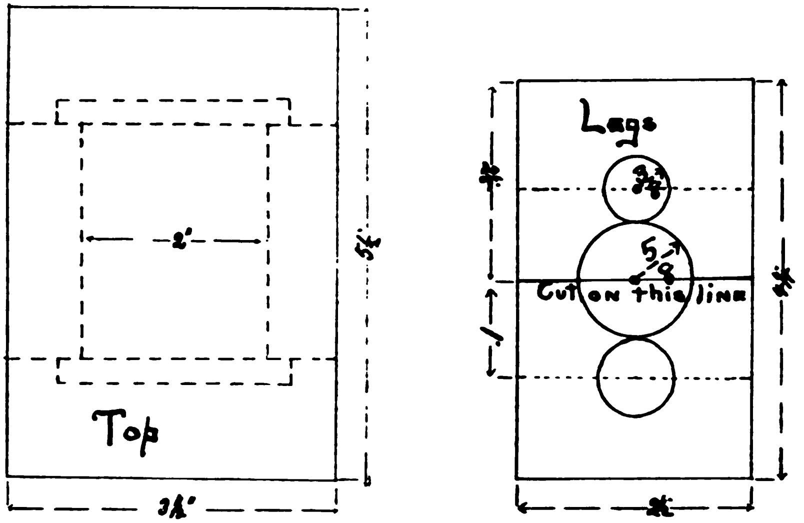


FIG. 5.—Table. (Stock, one-fourth inch whitewood.)

For the papering of the walls the children and teachers were asked to contribute from paper remnants at home. With the aid of the teacher of art, a color scheme for each side of the house was chosen; and the children instinctively selected small designs. The opinion of one child was that "big flowers would be bigger than the people in the house."

In very generous response to a suggestion, the sixth grade painted borders in water-color for some of the rooms. The tan-colored walls of the living-room and dining-room are bordered with buttercups and cat-tails respectively; the light-blue walls of the nursery, with a charming border of children at a party. Two of the border units which were not needed were used as wall decorations; one being of a cecropia moth that came from its cocoon in the schoolroom. (See Plate II, B and C.)

Mattresses, pillows, hemstitched sheets and pillowcases, blankets, quilts, and comforts, for two beds, were also made by the sixth grade. (The kindergarten will make an outfit for one bed.)

Window curtains and hemstitched linen tablecloths were as willingly made by the fifth grade. (The sewing was begun under the supervision of the grade teacher, but finished at home.)

Bricks for a chimney were made by the second grade, but, because of lack of time for baking and glazing, they will be kept for future use.

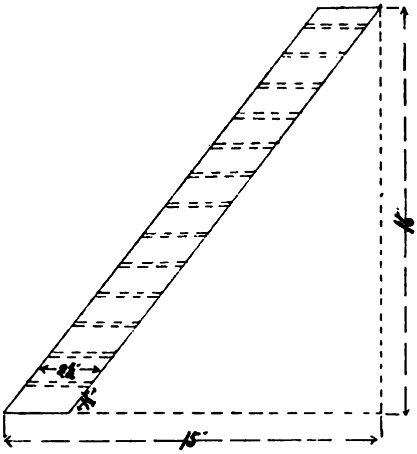


FIG. 6.—Stairs.

The interest and aid of these groups of older children were thoroughly enjoyed by the first grade.

The colors chosen for the outside painting of the house were stone-color and brown. The painting, staining of the furniture, and papering were done in springtime, when the same kinds of work were being done in the children's homes. This fact gave zest to the work in school, as well as suggestions as to how the work should be done.

Rugs of colored worsted were woven on simple looms. The looms were made by the children of this and another first grade. The weaving process was exceedingly slow and tiresome, and at the end of the year not one rug was completed. One has been finished during vacation, and three more may be finished at home.

Next year the second grade will weave rugs for us on better looms, by which more rapid results may be secured. The weaving by the first grade will be of a larger kind — raffia mats for the kitchen and bathroom, and hammocks for the attic playroom.

THE PARENTS' ASSOCIATION.

REPORT OF THE OCTOBER MEETING.

MRS. FRANK HUGH MONTGOMERY,

SECRETARY.

THE Parents' Association of the School of Education met at the school building on Thursday evening, October 20. The meeting was called to order by Dean Owen, who introduced the new president, Mr. Charles A. Heath.

Mr. Heath stated that the Parents' Association had done a good work in the past and hoped to do a larger in the future, and affirmed that parents and teachers were alike necessary to its well-being. He said that the work which had been done would have been impossible without the co-operation of the teachers. He emphasized the fact that discussion was open to all present. With pleasant wit, and apt stories of illustration of the differences between the old days and those of the new education, he made each feel at home and as if he had a part to play in making the association of value.

The secretary then gave a list of the chairmen of committees as follows:

Mrs. William Kent, chairman of the Finance Committee.
Mrs. Wilbur S. Jackman, chairman of the Home Committee.
Mrs. John O'Connor, chairman of the Education Committee.
Mrs. Warren McArthur, chairman of the Social Committee.

The secretary also outlined the work proposed for the year by the Program Committee. The plan was to have an evening devoted to each of the following subjects: "The Practical Side of the Child's Work;" "The Social Life;" "The Curriculum of the Elementary School;" "The Curriculum of the High School;" "The Physical Well-Being of the Child;" "Athletics and Play;" "The Child at Home;" and "Methods of Teaching;" with an evening devoted to the reports of the various committees and a discussion of the plans for the ensuing year.

It was voted, after a speech by the treasurer, Mr. A. V. Booth, that the dues be $2 a year, which would pay for the notices of meetings, circulars, refreshments, etc.

The topic of the evening, "The Place of Industrial Work in the Home and the School," was introduced by Miss Clara Mitchell, who spoke chiefly of that side of the work in the Elementary School. She said that there industrial work consists in spinning, weaving, dyeing, in sewing and cutting of garments. In the lowest grades the work is confined to the use of primitive materials, such as the gathering and preparing of flax and grasses. But the end is the control of their own powers on the part of the children, rather than the gathering of materials. The children prepare their own flax or wool, spin it, and make their own spindles and dyes. The object is to have them gain in power, and in knowledge of materials and processes, and to become as accomplished as possible in color, design — in whatever is necessary to the education of taste. The children must know how to make, but they must also gain a knowledge of the history of fabrics, and some knowledge of the scientific facts underlying the processes. They must know what they are about. They like to feel that they are true to fundamental conditions. The end will be a socialized whole. The habit of making something of which they themselves can be the judges increases their power of judgment. Such work also affords scope for originality and initiative. In addition, the work is so related to other subjects that through the work of their hands they come into the culture which belongs to them. Miss Mitchell concluded by giving a concrete example of the work of seven-year-old children, their second year in school. They studied sheep and their fleeces, invented spindles, wove, designed, and were told the great shepherd stories, such as those of the Hebrews. She read the story of Abraham and the visit of the angels as written by a six-year-old child who in the process of his industrial work had learned to read and write.

The next speaker was Mrs. Norton. She said that in her talk she should bear in mind two questions that were frequently asked her: "Why do you have boys learn to cook?" and, "Why do you have little children learn to cook?" She said that cooking was valuable as (1) manual training, and especially in developing delicacy of manipulation; (2) as applied science, the interest being very direct; (3) in social development. In this last respect, cooking had a higher social value than almost any other form of industrial work. It developed a sense of personal responsibility, of the dignity of labor, a control of environment, and a power of initiative, and gave a training in the economics of the consumption of time, material, and money. It was a good effect that work, often considered menial, should have a place in the high-school curriculum. The student gained a new interest in and appreciation of the home. With the younger children in especial there was an added interest in home life; and there was surely need for that in these days, and for boys quite as much as for girls. Little children came with great spontaneity to this work, and as it stood in such close relation to the other work in the school, the effects were very clearly marked. Mrs. Norton ended with a plea for co-operation by the home in the work of the high school as an essential part of the curriculum.

Mrs. William Hill then spoke on "Industrial Work in the Home." Mrs. Hill said that the assumption had been that our children were a product of evolution, being of finer clay than their parents, and that for them all physical hardship should be removed. But with the new education ideas had changed. Interest in colonial life and handicrafts had arisen and was played over in the schools. Valuable as this was, there was an omission of two important periods, for originally handicraft was, first, home education and, second, productive labor. At present the result was a change of basis of loyalty from the home to the school. The child did all of the interesting things at school, and at home expected to be entertained and to entertain. Mrs. Hill thought that perhaps the transfer from a smaller to a larger social unit was an advantage. The thing was to find something to take the place of the old industries in the home. In order to find out what children did at home, she had gone over the blanks filled out the preceding year by parents of the Elementary School children. Out of 228 pupils 195 had answered the question as to whether any work outside of the school was done by the children. Ninety-seven answered in the affirmative. Music had the largest representation. The other things enumerated were dancing, home study, a language, play, housekeeping, gymnastics, manual training, and Sunday-school lessons. The home used to represent productive labor. We must invent something new. The ideal of education is productive labor. It must be adapted to our present needs. Booker T. Washington had shown his students how to react upon their environment. It remained for us to accomplish the same with our more complex conditions. The aspect of home industry was democratizing. The emancipation of the woman from old-time household drudgery had come, as had that of the child, from "being seen and not heard." These changes have not met with universal approval. But what had met with universal disapproval had been the emancipation of the servants. If our home was considered a place in which to develop industries, instead of a place in which to display our prosperity, we might attain greater results. We need the co-operation of the family in eliminating the servant problem. Through our new knowledge of the science of food-values great strides may be made. Such co-operation had many practical aspects, and there were great possibilities in making use of the help of our children, if we could have patience with the child's slowness and his tendency to let his interest be sidetracked.

Mrs. Errant expressed herself as increasingly in sympathy with each speaker, and told in detail of ways in which she had tried household industries in the development of her own family. She had found training in the care of their own rooms and clothing, and especially in cooking, to result in the training of eye, ear, and touch, and to engender responsibility and adaptability. She had made great use of the summer vacations and had seized the time when the children had shown the strongest interest. But she had found that the great problem was that they had not the time to devote to the home which they should have.

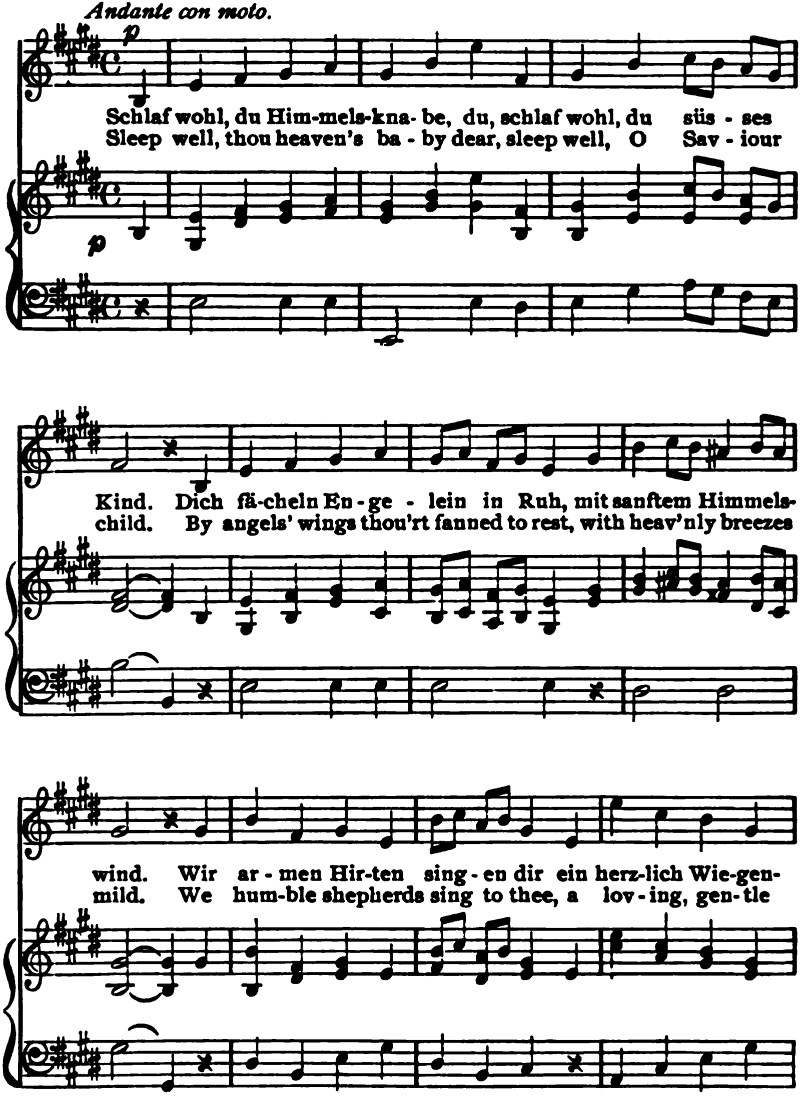
Mr. Jackman next spoke as parent and teacher. He considered the keynote of the Parents' Association to be to bring together the influence of the home and the school in the training of children. He told of the way in which the children were helping in the beautifying of the grounds by planting bulbs. He thought the work must result in something really worth while. He said if the parents could send in a list of what was needed in the home in the way of shelves, etc., the school would be glad to make them. We must not always be looking back to primitive conditions, but find the needs of our own. He urged that the association had an opportunity to take hold of the larger possibilities of the school. He said the school needed an assembly hall and a gymnasium, and that a farm could be used with great profit in teaching the children some of the conditions of rural life. He pleaded for the interest of the parents in these matters, and ended with a description of the plans of the magazine, the ELEMENTARY SCHOOL TEACHER.

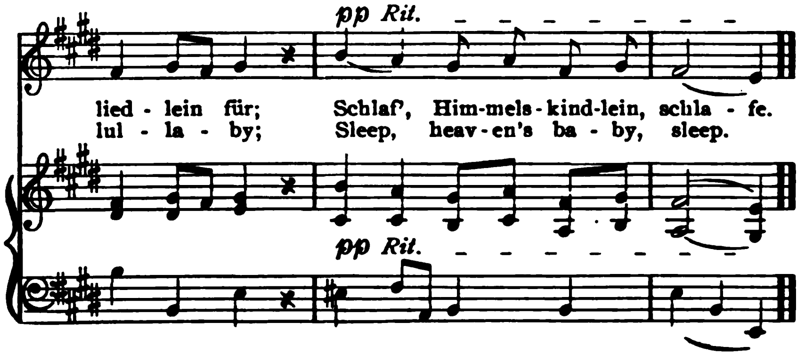
Mr. Owen expressed his great regret that Mr. Belfield could not be present and present his own field of manual training, in which he had labored so long and so successfully. He said that the equipment of the manual-training building was second to none in the country. He thought that the fundamental thing in industrial training was not technical skill, not to get immediate returns, but, broadly speaking, moral and spiritual results. The high-school work had a great reinforcement when this work was brought into the curriculum, and he wanted to do exactly the same thing for the girls as for the boys.

The meeting adjourned for refreshment and for social intercourse in the adjoining room.

WEIHNACHTSLIED (CHRISTMAS SONG).

RICHARD STRAUSS, OP. I


Andante con moto.
p
Schlaf wohl, du Him-mels-kna- be, du, schlaf wohl, du süs - ses
Sleep well, thou heaven's ba - by dear, sleep well, O Sav - iour
p
Kind. Dich fä-cheln En - ge - lein in Ruh, mit sanftem Himmels-
child. By angels' wings thou'rt fanned to rest, with heav'nly breezes
wind. Wir ar - men Hir-ten sing - en dir ein herz-lich Wie-gen-
mild. We hum-ble shepherds sing to thee, a lov - ing, gen- tle


pp Rit.
lied - lein für; Schlaf', Him-mels - kind-lein, schla - fe.
lul - la - by; Sleep, heav - en's ba - by, sleep.
pp Rit.

EDITORIAL NOTES.

The Mourners

THE new education trails in its wake a procession of mourners. They are they who mourn because the children of today are less advanced in attainment, less efficient in training, and less tractable in mind than they were of yore. True or false as this may be, it seems that either with the aid of the schools, or in spite of them, humanity is wise in a larger number of things, it displays skill in wider fields, and it is sensitive to a greater diversity of influences than ever before. Education is a response to conditions; it justifies itself in the public demand. It hardly seems credible that the new education responds less well to the conditions of the new times than did the old to the conditions of other days.

The Real Difference

The difference between the old and the new education is not merely one of degree; it is fundamentally a difference in kind. The old sought attainment, discipline, and docility of mind through the performance of tasks that were imposed from without. The new seeks the same ends through the growth of the initiative within.

Teacher Not a Taskmaster

Education is not a matter of tasks; and this is the pitfall that catches most of the critics who compare the old with the new. If education were the result of tasks arbitrarily imposed; and if the old set tasks for the pupils that were difficult enough to hold them to the top notch of effort; and if the new levied only those that were so easy that the pupils became dawdlers, then indeed should the mourners continue to mourn.

Personal Initiative

But here is the difference that is world-wide: the new, rejecting the idea of imposing tasks, seeks to establish conditions that challenge the personal initiative. The old, therefore, prized and measured attainment as a quantitative result; the new measures it alone by quality. The old recognized as training and discipline the so-called voluntary attention which seemed to be mainly the ability to stare, ox-like, a disagreeable, uninteresting, or unintelligible thing out of countenance. The new believes in the training and discipline that come from the pupil's effort to follow up from premise to conclusion something that mightily interests him. The old found satisfaction in the state of mind that was quietly receptive; the new sees hope in the turbulence and unrest of alert inquiry. These are irreconcilable differences in kind.

The Counter Initiative

The principles of the new education are frequently misunderstood, wrongly interpreted, and misapplied. The doctrine of personal initiative is sometimes overworked. Children occasionally initiate proceedings that, if pursued, would result in the eviction of their elders from under the parental roof. The privileges of the counter-initiative on the part of the old folk should always be recognized. The resultant of the two movements should be better mutual understanding and better adaptation.

He who demands the right of initiative in the household or community, be he old or young, must assume a definite responsibility for making it more pleasantly habitable. That is what the household or the community gets out of the deal. This cultivates that feeling of respect for the rights of others which, the mourners say, the new education does not properly inculcate. There is no conflict, therefore, between the freest play of the initiative and the most perfect form of governmental control, because the whole matter is placed at once upon the highest ethical grounds.

Initiative Not Endless Beginnings

There are those who believe that the initiative is all there is to it; that the new education is the doctrine, literally, of endless beginnings! If it works out that way in practice, it is usually because the teacher is a kind of pedagogical kangaroo. The true initiative is the reaction to a clearly discerned purpose. The attainment of the end, the completion of the work, is the final test by which we determine the sanity and educational worth of the initiative.

Motive

The keynote of the new education is *motive;* to establish and maintain the natural conditions which will enable the pupil to realize it, is the sole function of the teacher and all the machinery of the school. Purpose is derived from a recognized need; the new education measures its depth by the quality of the supply furnished by the pupil. The initiative involves responsibility for the result. The new education grants the freedom of the initiative to the child, but it places at the same time the responsibility of deepening his appreciation of the importance of the end upon the teacher and the parent.

Responsibility

The ultimate product of the new education is *a responsible human being*. This is indeed the highest result of all education — new or old — and there never has been any true education which did not end in such a goal. Here is the weak spot in that duplex educational machine of today, the school and the home. Both school and home often seem bent upon shielding the child from responsibility, instead of placing him under those natural conditions which tend to develop it. There are girls in the grammar grades — thousands of them — who, did occasion demand, could step into the center of a household and organize and manage it; there are boys in the grammar grades — thousands of them — that, were it actually necessary, could go right out into the teeth of the world and support their mother and rejoice in doing it. Such demands would, indeed, be too severe. Heaven forbid that childhood and youth should be worn thread-bare by those grinding exactions that often come to them because of the irresponsibilities or misfortunes of others. But between this extreme and the other, where they do not have any responsibility, there is an infinite distance. From the day when the little toddler neatly folds and lays away in her toy bureau the dress of her doll until she takes the helm of an establishment of her own, both she and her brother should be actual participants in due proportion in the thoughts and the work of the household and community. It is not necessary, it is not even right, that these responsibilities should be heavy; but it is absolutely essential that they should be real. *They must be worth something;* they must stand for something, not only for ends that lie within the children themselves; they must count for something also toward the joy, the happiness, and the welfare of others. This is the heart of the new education. Let the mourners be comforted.

W. S. J.

BOOK REVIEWS.

The Appleton Arithmetic. Books I, II. By J. W. A. YOUNG, University of Chicago, and L. L. JACKSON, State Normal School, Brockport, N. Y. Appleton (Third and last volume to appear soon).

IN these times great courage and good judgment are prime requisites on the part of qualified men to produce successfully a new series of texts on arithmetic. Particularly is this true in view of the facts that so great a number are upon the market, and that neither the publishers nor the public are prepared fitly to recognize and support what is pedagogically best. It must be conceded, however, upon impartial investigation, that the trained, experienced, and able educators, Messrs. Young and Jackson, have succeeded admirably, both from a pedagogic and from a practical standpoint, in giving the people of this country two books of their series which stand at the head of such publications.

In these books stress has been put upon the useful in a teachable way, while the obsolete has been omitted. A minimum of theory is presented, and that in the main incidentally. The arrangement of the subject-matter wisely follows the mental development of the child rather than the logical order. The problems are modern, systematic, interesting, and well calculated to impress the topics they illustrate. Frequently they are solved experimentally, in ways which appeal agreeably to children.

The pictures and diagrams are primarily for instruction. They will gain and hold the attention of learners because they deal with objects and scenes intrinsically interesting and within the experience of the young. The mechanical execution is attractive.

The frequent reviews are admirable. So also is the frequent recurrence to subjects as the maturity and broader grasp of the student enables him to master the topics more completely. Surely the introduction of the simplified weights is correctly done, especially in connection with the ingenious practical uses to be actually exemplified within the classroom.

A reader of the books is favorably impressed by the forms introduced to illustrate business transactions, such as gas bill, lease, money order, receipt, check, and cash account.

The principles are made evident by means of well-graded problems, drawn from every-day life in original ways. The devices used are valuable and suggestive as to correct methods of imparting the elements of mathematical knowledge.

The index is a new feature in elementary arithmetics, both appropriate and necessary in connection with the pedagogical order of topics.

Such are some of the reasons why these books are considered a distinct advance over previous arithmetics. They should aid in securing superior results in training the young where they are intelligently and sympathetically used.

E. C. LAVERS, PH.D.

PUBLIC HIGH SCHOOL,
Easton, Pa.

The Ship of State. By Those at the Helm. Boston: Ginn & Co., 1904. Pp. 264.

A BOOK written in language so well chosen that all who read may understand. Were such books more often read, there would be less absurd criticism of the heads of departments. The duties of our representatives at Washington should be known by every citizen. An excellent idea of them can be had by those who will take the time to read this little book. It should be in every school library. The portrait illustrations are very good. Those of the Senate chamber, the House of Representatives, and the upper deck of a battleship should be much better or left out entirely.

WILLIAM M. GIFFIN.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.

CROSS. *Silas Marner.* (New York: American Book Co.) $0.40.

MACDONALD. *Conciliation.* (New York: American Book Co.) $0.35.

CHARLES DICKENS. *Christmas Stories.* (New York: American Book Co.) $0.50.

TANNER. *Elementary Algebra.* (New York: American Book Co.) $1.

GOFF AND MAYNE. *First Principles of Agriculture.* (New York: American Book Co.) $0.80.

WALKER. *Our Birds and Their Nestlings.* (New York: American Book Co.) $0.60.

CARTER. *Nature Study with Common Things.* (New York: American Book Co.) $0.60.

SMITH. *Grammar School Arithmetic.* (Boston: Ginn & Co.) $0.65.

PARKER. *Uncle Robert's Geography;* IV: "A River Journey." (New York: D. Appleton & Co.)

BARDEEN. *Fifty-five Years Old.* (Syracuse, N. Y.: C. W. Bardeen.) $1.

PAMPHLETS.

CHANCELLOR. *Graded City Speller.* (New York: The Macmillan Co.) $0.56. Second Year Grade, Part 1; Second Year Grade, Part II; Third Year Grade, Part I; Third Year Grade, Part II; Fourth Year Grade, Part I; Fourth Year Grade, Part II; Fifth Year Grade.

Bulletin No. 1, July, 1904. Association of Teachers of Mathematics in the Middle States and Maryland. (New York: Published by the Association.)

ALEXANDER MELVILLE BELL. *English Visible Speech and its Typography Elucidated.* (Washington, D. C.: Gibson Bros.)

Reports of an Investigation concerning the Cost of Maintaining the Public School System of the City of New York. Department of Finance, New York, June, 1904. (New York: Martin R. Brown Co.)

The Cause and Prevention of Consumption. Circular issued by the Illinois State Board of Health, 1904.

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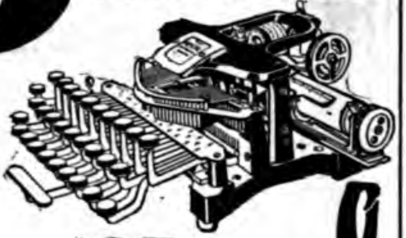

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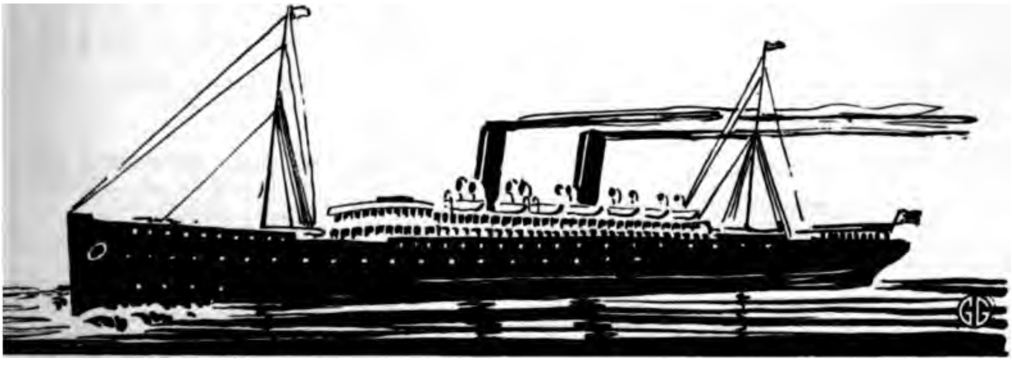

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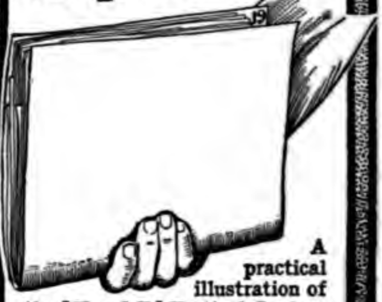

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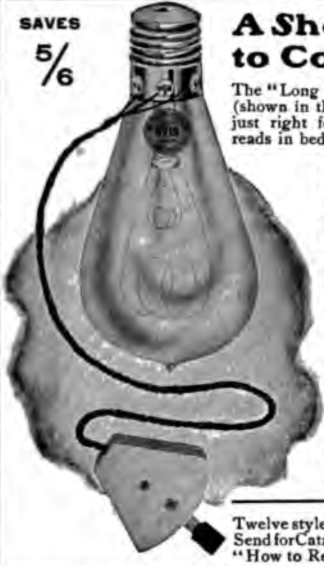

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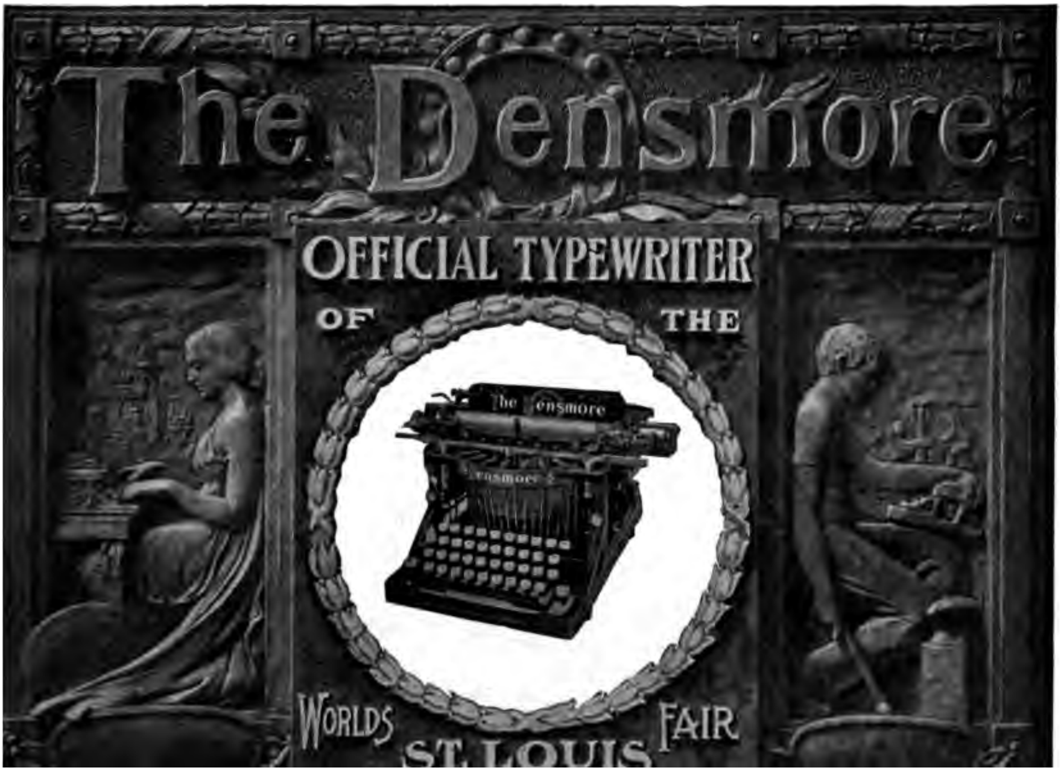

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CONTENTS FOR DECEMBER, 1904

NOTES ON THE WORK OF THE UNIVERSITY ELEMENTARY SCHOOL
WILBUR S. JACKMAN 193

THE CURRICULUM OF THE UNIVERSITY ELEMENTARY SCHOOL - - - - 202

AVENUES OF LANGUAGE-EXPRESSION IN THE ELEMENTARY SCHOOL
DELLA J. LONG 225

THE SOCIAL LIFE OF CHILDREN - - - MRS. PORTER LANDER MACCLINTOCK 232

PARENTS' AND TEACHERS' ORGANIZATIONS - - - - HELEN M. HEFFERAN 241

THE MEETING OF THE PARENTS' ASSOCIATION - MRS. FRANK HUGH MONTGOMERY 244

WORK OF THE HOME COMMITTEE OF THE PARENTS' ASSOCIATION
MRS. WILBUR S. JACKMAN 249

ANNOUNCEMENT FOR JANUARY - - - - - - - - - - - - 250

EDITORIAL NOTES - - - - - - - - - - - WILBUR S. JACKMAN 251

High-School Conference; Report This Year; Shortening the Curriculum; Not a Question of Scissors and Paste; Mechanics versus Psychology and Pedagogy; The "All-Around" Teacher versus the Special Teacher; How to Preserve the "All-Around" Idea; Upon What the Success of the Plan Depends; Application of the Plan to the High School; Pedagogy and Biology.

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VOLUME V NUMBER 4

THE ELEMENTARY SCHOOL TEACHER

DECEMBER, 1904

NOTES ON THE WORK OF THE UNIVERSITY ELEMENTARY SCHOOL

WILBUR S. JACKMAN
Principal

It is the intention to present from time to time in the pages of the *Elementary School Teacher* a brief summary of work being done in the University Elementary School. It is not the intention to set this forth as representing perfection in any way, but merely for the purpose of giving the patrons and all other friends of the school some idea of what is being attempted. These notes, therefore, will appear mainly in the form of reports from pupils and teachers with but little or no argument, exposition, or comment. Discussions of the work, embodying the reasons therefor, will appear in more formal papers which the teachers will prepare as they may seem to be needed. The following report is on domestic science and textiles. A report of a "morning exercise" is also given, showing the way in which the whole school is kept in touch with the work of the different parts. The following notes are upon what has been done during the fall.

COOKING AND SCIENCE

JENNIE SNOW
Primary Grades
JOSEPHINE T. BERRY
Grammar Grades

Each group of children recites twice a week, except in the first grade. One period is for science and preparatory work, and the other for cooking.

First grade.— The work is fruit juices, fruit, and grains. The children have made grape juice and lemonade. A great deal of number work in measuring has been done, such as: How many fourths in one cup? How many halves? How many fourths in one-half? 12 × 2 = 24; 6 × 2 = 12; etc. The science work connected with this is being done in the grade room.

Second grade.—The work here is fruit, seeds, and different parts of the plant used for food. It is following closely along the science work. Considerable written work and number has come into the work. The children have made grape juice, jelly, and candied apples.

Third grade.—The science work in the room has been planned as a study of evaporation and of the comparative amount of water in different fruits. The cooking has followed along the same lines. The children have made jelly and plum butter, and are now making raisins. A fair amount of work has been done in science. We have tried to let the children answer some of their own questions. In watching their jelly boil, and noticing the vapor from it, one child asked: "Is there water in grape juice?" To answer it we let them distil some grape juice, and they found it contained water. Work with vegetables will follow.

Fourth grade.—The subject here is sugar—what it does, where it is found, and how manufactured. The children have canned pears and candied pineapple. They have found by experimenting that sugar will help fruit to keep its shape.

Fifth grade.—General purpose: to prepare dishes for a Thanksgiving luncheon.

1. Canned pumpkin for pies: Colonial method of preservation by drying; present method by canning.

Object of canning: (*a*) to kill germs by boiling; (*b*) to exclude germs by canning air-tight. We examined molds on the pumpkin after a piece had been kept for two weeks, and found them to be tree-like, or branching, in form. Later, when some of the canned pumpkin spoiled, we examined the white mold developed in the top of the can.

2. Cranberry marmalade: Cranberries growing wild in Massachusetts were early used by colonists. Marmalades are like jelly, except that they contain pulp as well as juice. The reason they keep is that germs do not thrive in such heavy mixtures or in large amounts of sugar.

3. Hasty pudding: Meal a starch food; proved by iodine test. Expansion of starch, when heated with moisture. Necessity of cooking starch foods a long time at boiling temperature. The same process carried on in the fireplace in colonial times, on swinging cranes, and in iron kettles. From this lesson children gathered admirably the idea of the difficulty of colonial cooking. In their history work they had milled the corn.

4. Corn bread: Principle of combination—(*a*) dry ingredients together; (*b*) wet ingredients together; (*c*) dry and wet mixed together. Use of soda and sour milk for lightening.

The chief object of these lessons has been to illustrate the colonial history work; so there is no logical development of science subject-matter.

Sixth grade.— General topic: fermentation.

1. Study of agents causing deterioration in foods, by means of (*a*) mold on fruits; (*b*) gas forming in spoiling pumpkin; (*c*) micro-organisms in colonies in gelatine cultures, collected from the air of the schoolroom and halls. Methods of checking the work of these organisms — of preservation; drying, salting, smoking, pickling, preserving, canning, etc.

2. Examples: Types (*a*) dried apples done in lower grades; (*b*) apples, cured or dried in salt, sugar, or spices; (*c*) preserved peaches; (*d*) canned pears; (*e*) canned tomatoes; (*f*) Spanish pickles.

3. Practical lessons:

a) Preserved peaches: (1) Method of work: peaches cooked in saucepans, then canned. (2) Preservation effected by cooking with sugar, and sealing. Boiling kills the inclosed germs. Sugar is a poor medium for bacteria. Sealing keeps other germs out.

b) Canned pears. Method of work: fruit cooked in cans, surrounded by boiling water. Object and principle the same as in preserved peaches.

c) Canned tomatoes. Method the same as in canned pears: preserving agents — heat, and acid of the tomatoes.

d) Spanish pickles. Preserving agents — vinegar and spices.

e) Experiment: Collect micro-organisms from air on gelatine plates. Examine the forms thus obtained as an introduction to the lesson to follow next week, on yeast.

TEXTILES

LELIA PURDY

Fifth grade.— The children suggested various things which they would like to make. Hand-bags; some to be made for their own use at school for carrying books, pencils, erasers, dust-cloths, thumb-tacks, etc.; others were thought of as Christmas presents. It was necessary to make a general study of materials in order to make an intelligent selection for the hand-bags. Linen, rather than cotton, wool, or silk, was decided upon as being more appropriate, since it is durable, may be obtained in a coarse weave, and is adaptable to the cross-stitch. It furnishes a variety of neutral shades in the natural color.

The first problem in designing the hand-bags was involved in determining length and width; then the relation of the wide space to the narrower space, and the adaptability of the individual design to these spaces, and to the hand-bag as a whole. The children were limited in choice only by the fact that no finished article was to measure *more* than eight inches in width.

A rough outline indicating general proportion of the hand-bag, and a large suggestion of the design showing whether it was to be an all-over pattern, a horizontal stripe or stripes, or a center design, was first drawn with charcoal on rough manila paper. A piece of "try paper" was used to make several different units, using various combinations of the straight line and dot. As soon as a desirable unit was invented, each child repeated it in various ways to find the most effective arrangement. The children were limited to the straight line and dot as a motive in their patterns, but were free to use them as they chose in the design.

After each pupil had worked on the invention of a unit until he was for the time being satisfied, the group was shown other designs. These were studied with reference to spacing and grouping of the straight line and dot. These designs ranged from the simple straight-line-and-dot motive to the all-over pattern with a leaf, stem, or blossom motive, suitable for cross-stitch, embroidery, or stenciling. In textiles they could be applied to rugs, table-covers, curtains, pillow-covers, and articles of apparel. These designs were also studied for the purpose of getting a general idea of the possibilities of design, and of its application to certain material. The children were encouraged to study and criticise designs of wall paper, tapestries, rugs, etc., outside of the class.

After this general study and criticism of designs, a number of the class decided to improve their own designs by rearranging or adding to them. The children understood that they studied these designs, not to *copy*, but to enrich their ideas. One little girl said, when an all-over pattern of the holly leaf and berry as a motive was shown: "Oh, please, take it away quick! It is so pretty I'm afraid I'll copy it if I look at it any longer."

As soon as the designs in the straight line and dot were finished they transferred them to cross-section paper in dark and light, using a lead-pencil for convenience, since the unit of ten had to be changed in order to adapt it to the squares. When the design was shown in dark and light, it was necessary to select the colors for the cross-stitch pattern. The children tried various combinations with colored "school crayons" to find something pleasing. In making their choice of colors of floss they were advised to use only one and were limited to two colors.

After the designs were finished in color on the cross-section paper, a detailed outline of them was taken on rice paper to use as a guide in transferring them to the linen with a piece of carbon paper. In order to get the pattern straight with the material, it was necessary to make a "working edge" by raveling the warp threads. We then examined some pieces of weaving being done on the hand-loom and the Jacquard loom. Those who had been at the World's Fair talked of the weaving which they had seen from various countries. This led to the thought of how much of the textile industry forms a part of the social and commercial world.

While the patterns were in process of making the children worked at various times in committees, dyeing the floss they were to use for working the cross-stitch design into the linen. Before this work was done, the whole group wrote the formula for dyeing, such as: indigo vat — water, 2 gallons; indigo, 1 ounce; zinc dust, 1 ounce; slacked lime, 1 ounce.

As the work progressed, we frequently needed to refer to operations in mathematics that involved linear and liquid measure, units of weight, and the use of fractions.

After the pupils had made an indigo vat and had done some dyeing in it, they wrote a letter to Miss Pierce describing the process to her. Some work in chemistry on the absorption of oxygen came in here. The misspelled words furnished the subject for a spelling lesson.

Some colored floss that was too bright was neutralized by boiling it with logwood chips after they had been soaked over night. The thread was colored yellow by boiling the white skeins in a solution of fustic chips which had been soaked over night, first boiling it an hour in an alum mordant.

The children are now applying their designs by working them on linen in the cross-stitch.

A MORNING EXERCISE

This exercise occupied the time allowed for the meeting on two mornings — two periods of about ten minutes each. After the reading and a song, the pupils stood in their places, in turn (the smaller pupils mounting chairs that they might be the better seen and more clearly heard), and each showed a specimen of what the class had prepared in their class work. Each then gave a simple description or explanation of what had been done.

Reading, first morning, "The Chocolate Cat," Eugene Field; second morning, "The Johnny Cake." The pupils then reported as follows:

First grade.— Lemonade: I had half a lemon. I got one-fourth cup of lemon juice from it. I put four tablespoons of sugar into the lemon juice and filled the cup up with water.

Grape juice: I put my grapes into a sauce-pan. I covered them over with water. I put them on the stove. I boiled them till the skins came off. Then I drained them and put four tablespoons of sugar to them and boiled them a little more. This is a bottle of the grape juice.

Second grade.— Grape jelly: First we washed the grapes. We picked them off the stems, and then we broke them open. We put them on to boil. We strained them and put just as much sugar as we had juice. Then we boiled them again until they were thick. We poured the juice into glasses and left it over night to get hard. Then we took it home. This (holding it up) is a glass of the jelly.

Taffy apples: We made taffy apples for our Hallowe'en party. We cut out the stems and put in sticks. We took three cups of sugar, one-third as much water, and some vinegar, and let it boil. We put the thermometer in until it went up to 290°; then we put the apples in. We took them out and turned them around and around. Then we put them on an oiled plate to get hard.

Third grade.— When we boiled our grape jelly we saw the steam come off. We wondered if there was water in the grapes. We tried to find out. We took two flasks (flasks held up). We put grape juice into one and lighted the gas under it. At first the steam could not get all the way up the tube, but at last it did. It dropped into the other flask, and we had enough so each one could taste it. It tasted like soft water. We wanted to see if the boiled juice would jelly without sugar. We poured it into a glass, and this is it. (Turning glass upside down.)

Raisins: We wanted to make raisins. We took two kinds of grapes, and each child put one bunch in a lye dip. We just washed the other bunch. We wanted to see which would be raisins first. This is the way they look. They have been drying for two weeks. We wanted to see how much they would lose, so we weighed them. We are going to weigh them again when they are dry.

Fourth grade.— Canned pears: We wanted to can some pears for our luncheons. We wanted to know how to can them so they would stay whole. We experimented to find out. Some made a syrup and cooked some pears in it, and they stayed whole. Some cooked their pears in water and then added the sugar, and they broke up. We decided to make our syrup first and cook our pears in it. This is a can that William and I put up.

Candied pineapple: We candied some pineapple. We made a syrup of one quarter cup of sugar and two tablespoons of juice. We cooked the pineapple in it until it was soft and the syrup very thick. This (showing a piece) is a piece we made.

Fifth grade.— Corn bread: We were making preparations for a Thanksgiving dinner, as the Pilgrims used to have it. We know they had corn and not for a long time wheat, so we thought they probably had corn bread, and we made some. First we got our dry things together, and mixed them. They were: one-half cup of corn meal, one teaspoon of sugar, one-quarter teaspoon of soda, one saltspoon of salt. Then we mixed our wet things — one-third cup of sour milk, one tablespoon of beaten egg, one teaspoon of melted butter. Then we mixed all together, and put the dough in an oiled pan, and into the oven. We baked it fifteen or twenty minutes.

Cranberry jelly: We made cranberry jelly for our Thanksgiving dinner. The cranberries grew wild in Massachusetts ,and the colonists had them with wild turkey. We took a cup of cranberries and picked them over, and washed them. Then we put them into a sauce-pan with half a cup of water. We let them boil until the shells broke open, and the juice came out. Then we put them through a strainer, and had half a cup of juice left. We put half a cup of sugar in the juice and cooked it a little while. Then we poured it in hot jelly glasses.

Canning pumpkin: We were canning some pumpkin for Thanksgiving pies. First we took all the soft part out of the pumpkin. Then we cut it up and peeled it. Then we cut the good part up into little pieces, and put them into a Mason jar, and just laid the cover on. Next we put the jar into a sauce-pan filled with cold water and let the water boil, so that it would kill all the microbes that would make the pumpkin spoil. I forgot to tell that we put cold water in the jar with the pumpkin, and the pumpkin cooked till it was soft. Then we screwed the cover on tight, and put the jars away. Some of them spoiled. We thought that we either had not boiled the pumpkin long enough, or else the microbes had got in after we boiled them.

Sixth grade.— An experiment: The sixth grade has been finding different ways of preserving food. We knew that we could hang things, like apples, up in small pieces, and that they would dry and then keep. The microbes will not grow on it then because there is no water; so it will not spoil. One day we used salt to draw the water out of green tomatoes. So we thought maybe we could draw the water out of fruit with it too. We put pieces of apple covered with salt, and sugar and spices too, away, and they kept. The apple was dry, and did not spoil.

Preserving peaches: We are still trying to find a way of putting up fruit so that no germs will be in it. Now I'm going to tell you how we preserved some peaches. First we pared them, and cut them in halves, and took the stones out. Then we got one-half cup of sugar and one-half cup of water, and boiled them together, stirring till the sugar was dissolved. Then we put the peaches in, and boiled them until they were soft. Then we boiled the jars, and filled them with peaches and syrup up to the top. Then we put on the rubber and screwed the top on tight. We used the sugar to keep the germs from growing. Germs do not like sugar. We boiled it to kill the germs that were in it. We boiled the jars to kill the germs in them. And we filled them to the top and screwed the covers on tight, so that no more could get in.

THANKSGIVING PROGRAM

I

Music — " Come, Ye Thankful People, Come! "
Reading — Canticle of the Sun.
Music — " We Plough the Fields and Scatter."
Reading — Bible Selections.
Music — " I Will Praise Thee, O Lord! "

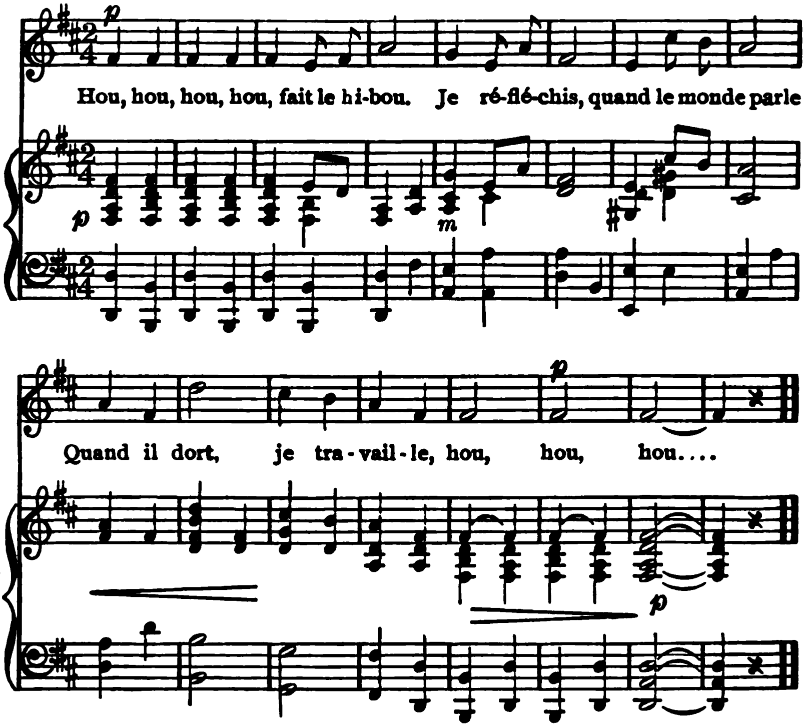
II

Music — " Song of the Harvest "..............................College Class
Sentences — " The World is So Full," " The Milkweed Babies "...First Grade
Music — " O'er Our Fields "..............................Primary Grades

Sentences — Autumn..Second Grade
Reading — "When the Frost is on the Pumpkin"...............Fifth Grade
Music — "Thanksgiving Song"...........................Seventh Grade
Reading — Autumn..Miss Fleming
Music — "Autumn Gales"..................................Upper Grades
Original Verses (see below) — "Autumn"..................Sixth Grade
Open to the house for sentiments on autumn and Thanksgiving.
Play — "Old English Harvest Scene"........................Third Grade
Music — "French Harvest Song".........Fourth, Fifth, and Sixth Grades

In a French harvest play given at the Thanksgiving celebration, the fourth-grade children were to represent owls who would sing to the harvesters at night. They were given the French stanza with the suggestion that they set it to music. This they did, each child offering a musical setting for a phrase, until the song was completed. Such melodies as did not fit into the spirit and purpose of the song were rejected by the class. The melody as it stands is the work of six of the children.

LE HIBOU


p
Hou, hou, hou, hou, fait le hi-bou. Je ré-flé-chis, quand le monde parle
p
m
Quand il dort, je tra-vail-le, hou, hou, hou....
p
p

Play — " Corn-Husking "..................................Seventh Grade (Bringing in the corn; reading, "Columbia's Emblem;" entrance of farmers; entrance of huskers; reading, "Corn Ballad;" dialogue, "Huskers;" rounds, "Three Blind Mice," "Scotland's Burning;" giving of prize; song, "Flow Gently, Sweet Afton;" dance, "Money Musk;" exit to supper.) Note: This play will appear in full in a later issue of this journal.

AUTUMN PICTURED IN ORIGINAL VERSE BY PUPILS IN THE SIXTH GRADE

The autumn has come, the trees are bare;
The squirrel is getting of nuts his share;
The birds have already ceased their song,
And the wind is whistling the whole day long.

* * * *

The glorious autumn days have come;
The bees have stopped their busy hum;
The leaves are dropping from the trees,
And the grass is bending in the breeze,
The leaves are turning gold and red,
And dropping to their winter bed.
Each day is growing a little shorter,
And the farmers dare not loiter.
Each day is growing colder,
And the wind is growing bolder.

* * * *

The leaves are red and yellow,
The apples ripe and mellow;
The plants their seeds are scattering;
The nuts are downward pattering;
The robins south are flying,
And all the flowers are dying.

* * * *

The squirrels their nuts are storing,
The wind will soon be roaring,
While the crows are calling,
And the brown oak leaves are falling,
Heavy frosts are descending,
The autumn days are ending.

THE CURRICULUM OF THE UNIVERSITY ELEMENTARY SCHOOL

AN OUTLINE

The curriculum of the University Elementary School is in a formative stage. A full statement covering the work for a year at this time is impossible, but the following outline is presented in barest detail for two reasons. First, in its preparation the teachers have been called upon to take at least a preliminary view of the principles which should control the development of a course of study; second, even this meager statement, mainly from the side of material, of what the school seeks to accomplish will give the patrons and others a clue which will enable them, perhaps, to begin an intelligent study of the school. While the outlines are written for the Autumn Quarter, it will be understood that they embody much work that will be extended into the winter and, indeed, continued throughout the year.

OUTLINE FOR THE KINDERGARTEN

AUTUMN QUARTER

ANNA ELIZABETH ALLEN

The artificial division of the kindergarten work into subjects that conform to three of the other grades is made, first, that the relation between the different grades of the school may be more clearly perceived, and, second, that these subjects may be seen in their most elementary forms. No such divisions will be apparent naturally to the observer, as the work is based upon the formation of a community. Everything that will enhance the value of this community ideal and make it practical will be used. The plan is shaped to this end. The children will be kept out of doors as much as possible, when the weather permits, collecting seeds and leaves, working in their garden, and taking excursions to the lake and parks.

The cooking as done in the kindergarten is not for the sake of cooking, as involving scientific control, but for the social side of the industry. The children assist the teachers as they would help their mothers at home.

Nature (beginnings of science and geography).— Comparison of our present surroundings with those of our summer outings. Watching for birds with which we became familiar last spring, and finding out which ones are left. Gathering, classification, and comparison of seeds: (1) growth in and out of pods; (2) how distributed. Method of keeping fruit and vegetables during the winter. Excursions to parks to watch for birds. Collection of cocoons, caterpillars, and leaves, and comparison of landscape with that of our summer outing. Excursions to garden to gather seeds and harvest our products. Planting of crocus and tulip bulbs. Points of the compass: (1) direction of homes from schoolhouse; direction of homes from shops, church, railroads; (2) direction of wind, and kinds of winds from the different directions. Effect of rain, wind, and sun on familiar areas — home yard, playground, garden. Effect of sun in ripening vegetables in garden.

Social life (history).— Present conditions in our homes: (1) economic: (*a*) supplies and furnishings for kitchen, bedrooms, parlor, dining-room, bathroom, etc.; (*b*) heating; (*c*) clothing; (2) social: (*a*) individual rights; (*b*) entertainment of guests, and relation between host and guest emphasized; Thanksgiving and Hallowe'en parties; Christmas entertainment and tree.

Number.— Used as a limitation in groups of 2, 3, 4, and 5. Simplest addition and subtraction as needed and spontaneously done by the children. Groups made use of: (1) taking partners in skipping, in marching, and in games; (2) committees for housekeeping; (3) blocks necessary for certain building; (4) number of inches in limiting building. Measurement in cooking.

Literature.— Mother Goose melodies; repetition stories, such as "The Old Woman Who Found a Sixpence." Nonsense rhymes: "The Tree" (Björnson); "I'll Tell You How the Leaves Came Down" (Coolidge); and other poems. Thanksgiving and other stories: "Little Table, Dish Up" (from the Norwegian); "The Invisible Cap" (Cooke's *Nature Myths*); "The Night before Christmas" (anonymous); "The Magic Curtain;" "St. Christopher;" "Story of the First Christmas."

Clay and Color.— Modeling: marbles and balls (for playthings), flower-pots, tea-rests, fruit, vegetables, cocoons, nests, etc. Painting: experimenting with colors in paint-box; painting landscapes as seen from our windows, fruits, vegetables, etc. Decorating: Christmas presents, flower-pots, and tea-rests.

Hand-work.— Christmas presents.

Cooking.— Canning pumpkins from our gardens; making for our Thanksgiving party — jelly, grape juice, and cookies; for Christmas, candy.

Games and dramatic work.— Simple romping games: "Cat and Mouse;" "Going to Jerusalem;" "Changing Chairs;" "Hide and Seek;" "Hiding the Slipper." Nature games: flying seeds; birds and bird life; caterpillar and cocoon. Dramatizing stories.

Music.— Simple scale songs from *Primer of Vocal Music* (E. Smith). Tone-placing: appropriate seasonal songs from collections by Eleanor Smith, Neidlinger, Hill, and Gaynor. Rhythm: simple skipping; marching and running in time; flying as birds and seeds; jumping and hopping.

OUTLINE FOR FIRST GRADE

AUTUMN QUARTER

ELSIE A. WYGANT

It is difficult to classify the work of little children into the usual departments of learning, as science, geography, sociology, etc., the names seeming too large for the very simple work which must make up the beginning of knowledge. Yet, because the effort is to give the children experiences and observations which shall make a working basis for these subjects later, the names are retained. On the other hand, a test of the unity of the work would be the lack of any sense of division or classification in the minds of the children. They should have simply a problem to the solving of which reading, writing, number, and the other subjects should lend themselves as tools.

The following outline covers only the work for the fall quarter.

Beginnings of history.— The farm as the source of food supply. Work out processes of flour- and butter-making. The children who had the farm work last year will begin with the building of a house from the standpoint of the necessity for shelter. Stories will be told of how primitive peoples, the Eskimos, and tropical peoples have met this necessity. The conditions which have determined the types of shelter will be made as graphic as possible, and the children will invent so much of the primitive ways as time and the vividness of their images allow. Field trips in connection with this work will be taken to a farm, to the Field Museum, and to a modern house in the process of construction.

Nature study (beginnings of science and geography).— Landscape: (*a*) vegetation (change of foliage, ripening of fruit, maturing of seed); (*b*) animal life (hibernation and metamorphosis); (*c*) daily record of temperature as explaining the above changes. Study of the trees to continue through the year. Care of pets in the inclosure below our windows. Collection and classification of pebbles. Making of crystals. (For details see September number of the *Elementary School Teacher*, p. 36.) Physiographic point; wave-action. Points of compass learned and held in mind during field trips.

Literature.— The daily hearing or reciting of a poem. The poems to be selected largely from *The Posy Ring* and Robert Louis Stevenson's *Child's Garden of Verse*. Stories: Æolus and the Bag of Winds," Hermes, Phæthon, Philemon and Baucis, Bellerophon, Browning's story of "Mulέykeh" and "The Pied Piper of Hamlin;" Kipling's "Just So Stories," and "Tomaii and the Elephants;" stories of Christmas in Holland, Italy, and Norway, and the legend of St. Christopher. Classic fairy-tales.

Reading and writing.— Reading will be used daily in connection with the other work. Recognition of words and sentences on the blackboard by the younger group. The older group will also have leaflets in script and print, and the reading of rhymes and jingles from various first readers. Daily use of phonics as a help to ear-training and enunciation. Both groups will write upon the blackboard and upon large paper with marking crayon and soft pencils.

Number.— The number work grows out of the problems which arise principally in connection with cooking, manual training, and science. The manual training will demand linear measure; one-half, one-fourth, and one-eighth of an inch; and ability to make rectangles, circles, and triangles. Cooking requires the recognition and use of standard units of measure, ability to tell time, and the use of the fractions one-half, one-third, one-fourth, and one-eighth. The science utilizes counting to one hundred by one's and two's, as in the reading of the thermometer and the use of metric system of weights. The constant use of the foot-ruler makes familiar the numbers up to twelve. Combining and separating these in actual work emphasize their relations, and with these the fundamental processes are all touched upon. Reading and writing of two-figure numbers.

Manual training.— A large dry-goods box will be remodeled for the house, and the necessary partitions, doors, windows, and stairs will be made. Cardboard: book-covers, box for minerals, case for tree collection. Cloth: duster for desks, and Christmas presents. Paper: envelopes, picture-frames, circle-makers, etc.

Cooking.— The cooking will be in connection with the science work. The amount of juice in various fruits will be noted by the making of lemonade, grape juice, orangeade, cranberry jelly, apple sauce, and attempts to use the dry fruits, as bananas, etc. Drying of apples and peaches. Find edible seeds and prepare them for eating, as corn, wheat, oats, nuts, etc. Making of butter.

Art.— Seeds and leaves will be used as units of design; later stenciled units. Design to be applied to a frieze for the wall, book-covers, and Christmas presents. Illustrations in paint, colored crayon, and chalk, of stories, and of activities seen upon the field trips. Drawing, painting, and modeling will be used in science and upon field trips as records and to further observation. In this work good spacing and some idea of composition will be kept in mind.

Music.— Special work in ear-training. Singing and notation of the scale and simple musical phrases. The children will be encouraged to originate texts and music for these melodies. Songs will be taught for school festivals, for the seasons, and to illustrate the work of the grade.

OUTLINE FOR SECOND GRADE

AUTUMN QUARTER

ELSABETH VANE PORT

Social life and history.— Autumn: food — a review of its sources and a study of its distribution in the city; winter: clothing; spring: shelter. Autumn: (*a*) Fruits and vegetables — gathering, packing, transportation, boats, docks, stores; visits to farm and truck garden. (*b*) Grain — kinds, growth, harvesting, hauling, trains, elevators, mills; visits to grain elevator and flour mill. (*c*) Meat and fish — very general idea of packing and shipping of meat; fisheries, sailboats, nets, fishermen's lives. (*d*) Dairy products — short review of dairy farm and visit, if possible, to Walker-Gordon Laboratory. In all this work many transient pictures will be made on the sand-table of farms, lake, docks, city, etc. In order to give a little more meaning to these occupations and have the children see the fundamental processes beneath the complicated ones, some of the primitive ways of obtaining and preparing food will be discussed and tried: (*a*) experiments in the making of primitive outdoor fires; (*b*) roasting potatoes and chestnuts; (*c*) roasting meat; (*d*) boiling meat in the water heated by hot stones; (*e*) baking eggs in clay; (*f*) baking fish on boards; (*g*) primitive grinding of grain and making of flat cakes; (*h*) making butter (1) in skin bags, (2) in primitive churns. For illustrative stories see *Literature.*

Geography.— The study of direction, which has been dealt with in the two previous years, will be taken up again in the second grade, with still further meaning. The children will discover the direction of the school from their homes, the parks, the lake, down-town, etc. Large, simple maps will be made in the sand-pan and on the board showing the relative position of the school to the elevators, the farm, and Beverly Hills. In order to do this, a rough idea of distance will be necessary. This will be gained chiefly through noting the time necessary to get to certain places.

Nature-study.— The work of the first quarter will be largely observation of the changes in nature due to cooler weather and approaching winter. Each day some one item will be added to the record. From these a kind of calendar will be made and printed for the children's reading. The records will be of general observation of insects, birds, flowers, vegetables, weeds, and trees. In order to make the observation more definite, some individual from each of the above classes will be selected for special study. These will be found on various trips to the garden, Midway, parks, lots, farm, and Beverly Hills. The changes in the rising and setting of the sun will be noted, and also the lengthening of the noon shadows and lowering temperature; daily observation of clouds, wind, rain, frost, and snow. In connection with cooking there will be a special classification and study of seeds, their manner of storing food, and their protective coverings as used for food by us. Seeds will be collected and experiments made to find out how they use their food supply. The children will plant crocus bulbs in the court-yard.

Literature.— Hiawatha's fishing; story of Mondamin; Ab and the pitfall; Mammoth Feast; Ceres; Ruth. These stories are chosen particularly as illustrative of the primitive cooking and food-getting. In addition, the children will have many of Stevenson's and other short poems, and one or two nature-myths and fairy-tales.

Reading and writing.— The children will read constantly from the blackboard, and will have written and printed lesson slips in connection with history and science. They will use the first simple readers also. With the work in phonics certain games or exercises of pronunciation of syllables will be used in order to help in getting clear, clean enunciation. Writing will be necessary in the keeping of records of observations, in making stories, and in keeping recipes. The children will begin wordbooks, in which will be kept the words learned during the year.

Number.— The cooking, making, and account-keeping will bring about a familiarity with the more common units of measure, with the writing of money, and with fractions such as two-thirds, three-fourths, and three-eighths. Incidental to the other work will come drill in addition and subtraction and the multiplication tables of two's and three's. Writing and reading numbers of four places.

Manual training.— The principal piece of hand-work for the quarter will be the making of a grocery store as a present for the first grade. The children will also make boxes for seed collections and insects, portfolios, and Christmas presents.

Cooking.— Making of grape juice and preserving fruit. Preparing apples in different ways. Cooking oatmeal. Parching sweet corn. Popping corn. Christmas candy.

Art.— (*a*) Painting of landscape, with particular view to showing autumnal changes. (*b*) Drawing of figures — harvesting and loading fruit, churning, fishing; farm animals; work in color and clay illustrative of primitive hunting and cooking. (*c*) Designs for portfolios.

Music.— Special work in ear-training. Analysis of two- three- and four-pulse rhythm. Singing and notation of short songs. The children will be encouraged to originate simple melodies with their texts. Songs for festivals and the seasons, and such as will correlate with the work of the grade, will be chosen.

OUTLINE FOR THIRD GRADE

AUTUMN QUARTER

GUDRUN THORNE-THOMSEN

History.— Subject for the year: trade, transportation, era of early discovery. Autumn quarter: visits to South Water Street, Illinois Central freight dépôt, docks, wharfs, steamers, a large grocery store. Trace some natural, also some manufactured, goods from their sources to the consumer. Study the function of a store. The children to have charge of the materials needed for their grade. Fitting out of a store, the children taking turns to be salesmen, bookkeepers, etc. Early Norse and early Greeks. Geography of these countries as a background. Study of products of different localities, barter, exchange.

Geography.— Typical environments: Norway — mountains, fjord-coast, islands, bays, harbors; climatic conditions, sunless winters of the north, midnight sun in summer; snow and ice; forests with their animal life; the sea with its life. Greece — river-valleys, hills, coasts, islands; climate.

Nature-study.— Field trips (to some of the following places) to study the autumn aspect of the landscape: (1) our garden; (2) Beverly Hills; (3) south shore; (4) north shore; (5) swamp; (6) Purington; (7) the prairie. Materials gathered on these excursions will be the basis for study in the school: (1) plants; (2) insects; (3) soil; (4) snakes; (5) toads and frogs. Points for study: How do plants come back to us in the spring? Comparison between the plants as now seen, and as studied in the spring. This will involve a study of the parts of plants and their function. Enlarged roots and underground stems, such as beets, parsnips, turnips, potatoes, left to sprout; the reason why. The purpose of the fruit to the plant. The reason for color and form, and for shells in nuts. Other devices of plants for distributing seeds. The children will plant tulip, crocus, and hyacinth bulbs in front of the school building. Window-boxes will be made to hold plants for study; also flowers for decoration of room. Insects: How do insects come back in the spring? Study butterflies, moths, ants, and bees. Insect-cages, ant-houses, and possibly a beehive will house the insects for close observation. It will also be possible to see snakes and toads burrow in the sand and to keep them until spring. Soil: Characteristics of the soils from the different areas visited and their properties. Sand and its formation; swamp soil and its formation; garden soil and its formation; clay and its formation. Economic uses of these soils. Metals (work related to history): copper, iron, and lead; where found, mining, uses. The children will make furnaces; melt, mold, and cast in lead. Experiments related to cooking.

Literature and oral reading.— The children will be told several Norse sagas of the Vikings; stories from the saga of King Harold the Fair Haired and the Volsunga saga; the *Odyssey,* parts read by children from Palmer's translation, parts read, or told by the teacher; Norse myths: "Thor's Journey to Jotunheim," "The Death of Balder," "The Gift of the Dwarfs;" Greek myths: "Apollo and the python," "Athena and Perseus," "Hermes and the Cave of Winds;" fairy-tales to be told to the children: "The Land East of the Sun and West of the Moon," "The Seven Swans." Through the simple, picturesque language of the sagas and the *Odyssey,* as also from the direct childlike imaginings of the fairy-tales, the children will learn to appreciate, and unconsciously to imitate, the classic style. Poems will be studied with a view to rendering them in a beautiful way to others: "Windy Nights," "The Shadow," "The Lamplighter," by Robert Louis Stevenson. For Thanksgiving exercises: Greek autumn festival dramatized. For Christmas: a Norwegian Christmas scene.

Reading and writing.— For some of the children considerable phonic drills and reading of very easy stories. Other children will read for information in history, geography, and science. All the children will keep records of their work in written form. Through the necessity of making these written records, spelling, rules of grammar, punctuation, and capitalization will be taught.

Number.— If the children are actually doing work which has social value, they will gain accurate knowledge of the activities in which they are engaged. The children will keep a record of all their expenses for materials used in the school, and will have charge of a store which will distribute this material. In cooking, weights and measures will be learned. The children also will keep accounts of the cost of ingredients. Proportions will be worked out in cooking recipes. Number is demanded in almost all the experimental science work, and in construction in wood and cardboard. Outcome: automatic use of easy numbers, addition, subtraction, multiplication, short division, and easy fractions.

Manual training.— Making of portfolios, boards for drinking-cups, Christmas gifts — sleds, boats, wagons.

Cooking.— Drying of grapes for raisins (evaporation). Comparison of the amount of water in different fruits. Making of plum butter and the reason for sealing it for winter use (molds). Study of starch. Starch grains in different vegetables; the effect of heat on them; the cooking temperature of starch; the thickening power of starch. Cooking of vegetables, white sauce, and soups. Christmas candies.

Art.— Drawing and painting: records of the study of plants, seeds, and fruits; autumn scenes (nature-study). Blackboard drawing of hills, mountains, plains, coasts, animals in the northern forests (geography). Scenes illustrating early transportation, men on rafts, in dugouts, people exchanging products (history). Stories illustrated (literature). Designs to decorate portfolios; also to decorate bowls and vases made in clay. Clay-modeling: vases; bowls for school and home use; Christmas presents.

OUTLINE FOR FOURTH GRADE

AUTUMN QUARTER

GERTRUDE VAN HOESEN

During the previous years the children have been getting acquainted with their environment, and know to a certain degree what the prominent features are. But the important characteristic of movement — change — has not been emphasized. In the fourth grade the children study the growth of Chicago, not as a closed book, but as an interesting, progressive drama, worthy of close attention. It is necessary, therefore, that the study of the simpler social organs go hand in hand with the history of the city. The story of their beginnings, their growth, and the reasons for instituting them will explain their present conditions. It is also necessary that a study of the present physiographic condition be made, for it is only through this phase that the children can get any idea of what our city means. For Chicago illustrates man's struggle and conquest over physiographic conditions. The work has been planned with the idea of giving the children some idea of the relation of a city's growth to a geographical situation.

HISTORY

I. Civics.

1. Water-supply: (*a*) Present condition. Visit the pumping stations. How is the water carried to our homes? Laying of water-mains. (*b*) Story of the first crib. (*c*) Examination of water. Experiments in purifying—(1) filtering, (2) distilling. What is the city doing to furnish pure water?

2. Drainage: (*a*) Sewerage—how laid. (*b*) Story of the reclaiming of the swamps.

3. Illumination: How is the city lighted? Comparison with other cities. History of the illumination of the city.

II. 1. History of Chicago at the time when only Indians lived here: (*a*) Study of the old water routes. (*b*) Appearance of the country. (*c*) Industries. (*d*) Transportation means and routes to the East.

2. Early French traders.

3. Story of Marquette and Joliet.

GEOGRAPHY

I. Field work.

1. South shore.

2. Swamp at Seventy-fifth Street.

3. North shore.

4. Purington clay-beds.

Special points to be made in land formation:

1. Building coasts—south shore: (*a*) Formation of sand-bars. (*b*) Gradual change from inclosed lagoon through the swamp formation to dry land. (*c*) Explanation of ridges.

2. Wearing coasts—north shore: (*a*) Formation of cliffs. (*b*) Formation of ravines. (*c*) River action.

3. Swamp formation—Seventy-fifth Street: (*a*) Conditions for formation. (*b*) Conditions for change.

4. Clay-beds at Purington: (*a*) Examination of clay. (*b*) Examination of pebbles found in clay; comparison with pebbles on the lake shore. (*c*) Formation of clay. (*d*) Its use; visit the brick yards.

II. 1. Geography and topography of Illinois: (*a*) Its old river routes. (*b*) Its relation to Lake Michigan, and to the Chicago and Calumet Rivers.

2. The St. Lawrence Basin in its relation to Chicago, i. e., a waterway from the Old World to the New.

NATURE-STUDY

I. Bird life: Identify and study the habits of as many of our common birds as can be found. This will lead to a study of our winter birds, as it is too late in the season to find the birds that are here for the summer. The class will use Lange's *Birds of Indiana.*

II. Field work.

NOTE.— On all excursions a camera will be used, but the children will also carry and use sketching materials.

The excursions noted below will form one of the basic points in the study of Chicago:

1. South shore.
2. Beverly Hills.
3. Purington clay-beds.
4. Swamp.
5. North shore.

Special points:

1. A comparative study of plant life on these areas: (*a*) The collection and identification of plants. (*b*) The identification of the trees; note especially (1) where found, i. e., the nature of the soil; (2) mode of growth — reason for it. (*c*) Examination of soils, if necessary to discover the relation of soil constituency to growth. (*d*) How do these plants scatter their seeds?

2. A comparative study of animal life: (*a*) Habits of these animals — food, homes, etc. (*b*) Their preparation for winter.

The class will reproduce on the sand-pan the special typical features of each area.

III. Weather record. Special points:

1. Slant of sun's rays. Measurement taken weekly by means of the skiameter. The only point made this term will be the fact that the slant varies and the relation of variation to the position of the sun in the sky.

2. Average temperature.

IV. Experimental science in connection with cooking.

V. The children will make a tulip bed under the front windows, and plant crocus and snowdrop on the lawn. They will fill the window-boxes with house-plants, of which they will have the care, and start a number of different bulbs indoors. They will also set out several varieties of small fruits.

ENGLISH

I. Literature.

1. Story of Siegfried.

2. Group of Rides: (*a*) "John Gilpin's Ride." (*b*) "How the Good News was Carried from Ghent to Aix." (*c*) "Sheridan's Ride." (*d*) "Paul Revere's Ride."

3. Poems and stories of heroism.

II. Speech, oral reading, and dramatic art.

1. The dramatization of some part in the celebration of the autumn festivals; e. g., Hallowe'en, Thanksgiving, and Christmas.

2. The study of the "Group of Rides" mentioned under *Literature*.

3. The telling of favorite stories.

The children will not be expected to read the poems and stories at first. An endeavor to establish a feeling for the beauty of style will be made by reading to them beautiful poems and stories. These stories and poems may or may not be read later by the pupils.

III. Reading.

1. For information, in connection with the work under consideration.

2. For pleasure: (*a*) fairy-stories and fables. (*b*) Robert Louis Stevenson's poems. (*c*) The poems mentioned under *Literature*. (*d*) Parts of Baldwin's *Siegfried*. (*e*) Stories of animals.

If the class, or members of it, are unable to read silently the reading matter which is necessary, a systematic drill in phonics will be carried on which will give those children the necessary help.

IV. Spelling. The children will each keep a book in which will be written every word that is misspelled and every word for which any child has asked during a written lesson. By learning these words the children get command of the vocabulary necessary to the work of the year.

V. Writing. The natural demands of the subjects of study for writing is constant. The children will write papers of many kinds:

1. Records: (*a*) of science work; (*b*) of excursion; (*c*) of cooking, i. e., recipe books.

2. Stories.

3. Letters.

4. Expense accounts.

5. Songs.

Skill to be acquired through the above work: Correct use of capitals, period, interrogation point, and quotation marks; the use of the apostrophe in possessives and some contractions; and a few very simple uses of the comma; very simple paragraphing.

FRENCH

Chansons de jeu: "Savez-vous planter des choux?" "Il était une bergère;" "Le mer est bien tranquille;" "Sur le pont d'Avignon;" "Au clair de la lune."

Stories of Marquette and Joliet at St. Ignace; story of Marquette's winter at Chicago; fairy-tales told, read, and dramatized. French luncheon and games once a week. Reference grammar and reader: Part I of *Beginners' Book in French*, by Mlle. Sophia Doriot.

GERMAN (FIRST YEAR)

Instruction mostly oral. The expressions for every-day activities will be learned. We shall have a great many games, rhymes, riddles, songs, and dialogues.

ARITHMETIC

In the correlation necessary to the general work of the grade, the following should be the outcome in arithmetical knowledge:

1. Familiarity with the use of the multiplication tables through the 12's.

2. Tables of dry and liquid measures in connection with cooking and history.

3. Tables of linear, square, and cubic measures in connection with manual training and nature-study.

4. Ability to add, subtract, multiply, and divide whole numbers as rapidly as is consistent with the general development of the individual child.

5. Use of simple fractions and decimals in connection with nature-study, cooking, and manual training.

6. Keeping of simple accounts.

MANUAL TRAINING

Wood: Screen — cleaning and staining a table in grouproom; Christmas gifts. Cardboard: Portfolios for work. Clay: See *Art.*

COOKING

Study of sugar: Making of vinegar for Christmas candies. Vinegar plant — what it is and what it does. Acids and what they are. Canning peaches and pears. Making candied pineapple. Where sugar is found, and how it is manufactured. Foods in which we find sugar. Christmas candies.

ART

I. Drawing and painting.

1. Landscapes: (*a*) Immediate landscape showing autumnal changes. (*b*) Typical areas visited.

2. Trees and plants growing on the areas visited.

3. Illustrative work.

4. Designs: (*a*) For portfolios. (*b*) For pottery.

II. Clay.

1. Animals in connection with nature-study.

2. Statuettes and tiles in connection with history and literature.

3. Pottery: (*a*) For use in school, i. e., jardinieres. (*b*) For Christmas presents.

MUSIC

Voice-training. Exercises in the sharp keys for sight-reading and notation. Each group will be encouraged to write a composite original song on a topic suggested by the children. They will notate this song in their music notebooks. Harvest, Thanksgiving, and Christmas songs will be given; also German and French dramatic songs.

OUTLINE FOR FIFTH GRADE[1]

AUTUMN QUARTER

CATHERINE PIERCE

The work for the quarter is mainly grouped about the history which is an attempt to meet the needs of the children's widening social interest, and also about the field work which give them a closer acquaintance with their immediate surroundings.

HISTORY

The history of the previous grade is that of Chicago itself. The history of this grade takes a backward step to that earlier period which helped make Chicago possible and which is familiar to the children through family tradition.

Study of the Plymouth colony — occupations, industries, and development of self-government. (*a*) Home — occupations of family; appearence of house; manners, dress, and customs. (*b*) Farm — occupations. (*c*) Village (Plymouth as type) — history of settlement; town meetings; trade and occupations.

The children will spin, dye, and weave; make candles and soap; arrange a colonial room; make drawings and sketches of each other dressed in colonial costume and carrying on typical occupations.

GEOGRAPHY

1. Study of geographic conditions influencing the settlement and development of New England.

2. Field work in areas about Chicago that show physiographic likeness to the New England region: (*a*) Stony Island (glaciation); (*b*) Glencoe (stream action and wearing coast).

3. Study of the topography and climate of North America as a whole.

4. Use of political maps in connection with the study of current events.

5. Making of maps in sand and chalk-modeling; making sketches and models in sand-pan of areas visited in field trips.

SCIENCE

1. Field work. Study of plant societies in swamp, ridge, and meadow. Relation of plants to soil and water, and their methods of reproduction.

2. Garden. Preparation of a tulip-bed and planting of bulbs on the school grounds.

3. Meteorology. Observations recorded to enable an understanding of the climate of North America: (*a*) rainfall and temperature; (*b*) sun slant and length of day; (*c*) relation of sun slant to temperature.

4. Experiments connected with a study of colonial industries: (*a*) Textile work — study of fibers used; dyeing — action of acids and alkalis on vegetable

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[1] Prepared largely by Mary Reed; on leave of absence for 1904–5.

and animal fibers. (*b*) Cooking — relation of heat to food; study of starch. (*c*) Soap-making — action of acids on alkalis.

5. Written records of all work done and observations made, illustrated by drawings, sketches, and photographs.

LITERATURE AND ORAL READING

The literature is selected to supplement the work in the history of the Plymouth colony. The children will read selections from Bradford's *Plymouth Plantation* and Hawthorne's *Grandfather's Chair,* also Longfellow's "Miles Standish." For more dramatic expression Tennyson's "The Revenge" will be studied carefully. Some simple dramatization may be made, should the work in history or literature call for it.

ENGLISH

Through records kept in the science and geography lessons and frequent composition work connected with history, it is expected that the children will gain a free and correct use of written English. Attention will be given to paragraphing, to punctuation, and to principal parts of the sentence.

FRENCH

The most popular French historic rounds will be dramatically sung and played by the children of the fifth grade. The conversation at the French luncheons and the vocabulary needed in the playing of French games will give the idiomatic twist of the language so characteristic of a people. The reading will center around Acadian life, its relation to Normandy, the friendship of the French for the Indians, etc. The thought of the reading lesson will be illustrated by the dramatic presentation of the most characteristic events of Acadian life. For a reference grammar the grade will use Part II of *Beginners' Book in French,* by Mlle. Doriot.

GERMAN (SECOND YEAR)

Short review of last year's vocabulary. In grammar, singular and plural of very common nouns. We shall read Foster's *Geschichten und Märchen.* Conversation: dialogues, questions, etc., about every-day life. Nursery rhymes, riddles, songs, and simple poems.

NUMBER

The number work of the quarter will be correlated with the subjects given below. Exercise will be given in fundamental processes whenever necessary.

1. Working-plans for looms and Christmas work requiring scale drawing; linear and square measure and cost of material.

2. Addition and subtraction of decimals through use of metric weights; addition, subtraction, multiplication, and division of fractions through use of recipes.

3. Linear and square measure through field work and making of tulip-bed: fractions and decimals in use of rain-gauge; long division in averaging of temperature and rainfall.

4. The keeping of simple accounts will be taught in connection with the children's use of the school-supply fund.

HAND-WORK

1. Textiles: spinning, dyeing of threads; weaving rug for colonial room; making small bags worked in cross-stitch, and samplers.

2. Manual training: (*a*) making of looms, trenchers, and hornbooks as required in the textile work and history study; (*b*) making articles for Christmas gifts, with special attention to working-drawings and technical excellence.

COOKING

1. The making of dishes illustrating the methods of colonial cooking, including the milling of corn for flour and cooking by an open fire; preparation of a Thanksgiving luncheon; making Christmas candies, using vinegar made by the fourth grade.

2. A study of starch.

ART

1. Design: The art for the quarter will be the more formal presentation of the principles of design growing out of the work in textiles and manual training.

2. Color: Records of field work and seasonal changes; illustrations of poems studied; studies of colonial costumes.

MUSIC

Season songs. Exercises for sight-reading and notation. One original song with its notation. Characteristic songs in French and German, and one typical Puritan hymn.

OUTLINE FOR SIXTH GRADE

AUTUMN QUARTER

ANNA HIGGINS

HISTORY

The aim of the work in history is to broaden the view of colonial life in America, by adding the life of the French to that of the English and Dutch already studied, to compare the French and the English life in the New World, going back into the home countries to account for the contest, with emphasis on the differences in their ideas of government. The climax will be the coming together of the French and English in the New World, the failure of the French, and the success of the English, in the French and Indian War.

The class will study the French in America, their coming, something of the life at home and the conditions in the Old World that led to their coming; the great fishing industries in America; their interesting contact with the

Indians (Parkman and Champlain's journals); their colonial life; a seigniorage; the soldier, the explorer, the trader, the missionary (Parkman and Bourinot); their life in Canada; their spreading out; the voyages to the Mississippi; La Salle, Marquette, Joliet (Louisiana Historical Society Papers; Jesuit relations; visit to Chicago Historical Society); the causes and results of the French and Indian War. Sand-modeling, map-drawing, and illustration with pencil and water-colors will be an integral part of the work. A seigniorage will be built.

Then will follow the struggle of the English colonists with the mother-country. Stress will be laid upon the great industrial feature of the struggle, and the ideals of the colonists as to government. Here we shall come in touch with France again in an interesting way.

The last quarter will be devoted to Greece, and we shall try to show that there have been struggles for liberty in times long past. A glimpse of the Greek fighting his Bunker Hill at Marathon will be followed by a study of Greek physical culture and games. The civic pride of the Athenians will be shown by a study of the Parthenon, and the children will consider the work of the civic improvement associations of our own city.

GEOGRAPHY

North America: (*a*) Topography, mountains, plains — central and coastal; interpretation of existing conditions. (*b*) Mountains, glaciers; excursion to Stony Island; mining and miner's life; smelting of ores. (*c*) Rivers; St. Lawrence, Mississippi; structural study, and how they affected the settlement of the country. (Here touching the history, the early French settlers in Canada and the Mississippi Valley.)

Sand models, chalk models, and maps will be made by the class.

SCIENCE

1. Field work: Preparation of plants and animals for change of season, especially underground provision of plants, bulbs, roots, etc.; collection for mounting; form and structure of bulbs and other underground forms; animals that migrate and animals that hibernate.

2. Garden work: (*a*) Care of strawberries planted in the spring, preparing them for winter and for next year's growth. (*b*) Gathering of potatoes planted in the spring. (*c*) Planting of tulips around the fountain; preparation of the beds for winter. (*d*) Planting of daffodils in pots for winter blooming.

3. Change in weather affecting plants and animal life; distribution of sunshine; variation of temperature; rainfall.

4. Heating of houses; simple experiments in heat.

LITERATURE

The literature will add to the picture of the French life at home and in America at the time of the exploration and settlement of Canada and the Mississippi Valley by the French. Harriet Martineau's *Peasant and Prince;*

selections from Parker's *Seats of the Mighty;* selections from *Evangeline.* The story of St. Francis will give an idea of the missionary spirit. Will read the "Flowers of St. Francis," and Whittier's "The Fisherman."

FRENCH

Chansons de jeu: "Avoine, Avoine, Avoine;" "Malbrough s'en va-t-en guerre;" "Frère Jacques;" "Quand Biron voulut danser;" "Au clair de la lune;" "Noël."

Stories of La Salle at the court of Louis XIV. La Salle with Illinois Indians — their habits and customs; paints — ochres, clays. Indian feasts.

History of the potato: Peru to Paris; dramatic reception of the potato at the French court.

Parmentieu and Franklin — their work for the poor; the instigating of bread-making under supervision of the French government.

Imaginary trip to Paris; French life and habits; the market-place, store, etc.

Reference grammar: *Le Français pratique,* by Paul Bercy; Contes et légendes.

GERMAN (THIRD YEAR)

Singular and plural nouns; use of the definite article. Read Foster's *Geschichten und Märchen.* Conversation based upon animal stories and anecdotes. This class will give a Christmas play.

MATHEMATICS

Drawing to a scale; fundamental processes with integers and fractions in building a French seigniorage in history.

2. Comparisons of areas in history and geography.

3. Values of products in geography.

4. Planting of tulip-bed calls for circumference and area of circle: (*a*) Area of triangle; meaning and history of some units of measure; cutting and drawing different kinds of triangles, comparing areas with areas of rectangles; find area of triangle. (*b*) Circle: radius, diameter, circumference; cutting and laying triangle on circle; find relation of circumference to diameter; find area of circle; find area of part of circle.

In all the work mathematical expression will be emphasized, and the equation or mathematical sentence used.

MANUAL TRAINING

The class will plant bulbs in the schoolrooms for early blooming. For these they will need window-boxes, which they will make. They will plant tulips around the fountain in the court. This bed will need to be protected, and the children will build a rail around the bed. They will also make some hotbed covers. They will make a large loom in connection with their textile work.

TEXTILES

Weaving of coarse linen and wool. From the linen they will make a table-cover for the schoolroom. Construction of looms. Flower-pot covers made, and made from raffia. Making of costumes needed in the school. Use of the sewing-machine.

COOKING

Fruit cooking, canning, and preserving by different methods. Experiments with the keeping of fruits under different conditions will lead to the study of fermentation, which will be considered further in connection with the use of yeast in bread-making. The bread-making will extend into the Winter Quarter, to be followed by work in batters and dough, and experiments in methods of lightening them.

ART

Illustration of history — sea, boats, coast; some pictures of the French country and life at home, and some of the life in the new country. Illustration of description and story in literature. Illustration in geography. Landscape work in nature-study. Christmas booklets.

MUSIC

Voice culture. Exercises in all keys for sight-reading and notation. Original songs as musical self-expression; for example, a song of the French explorers, or setting to music "The Fisherman" in the *Songs of Labor.* Songs of the harvest, of Thanksgiving, and of Christmas. French and German songs for plays and games.

GYMNASIUM

Games, indoor and outdoor, will be a feature of the work: "Fox and Goose," "Dodge Ball," "Three Deep," battle-ball and basket-ball, etc. Rhythm work — skip, slide, and hop dancing-steps. Free exercises in the gymnasium, and in the classroom for rest. Apparatus work on the ladders, rings, ropes, poles, and beams.

OUTLINE FOR SEVENTH GRADE

AUTUMN QUARTER

HARRY ORRIN GILLETTE

HISTORY

Note on the year's work.— Expansion of the United States from the thirteen states to its present limits, and the development of the nation industrially, socially, and politically. Consideration of some of the important present social and civic problems. Classroom study and reference reading; visits to the rooms of the Chicago Historical Society and the Field Columbian Museum. Excursions to great industrial plants: ore docks, steel mills, an oil refinery, a grain elevator, and the McCormick Harvester Works.

Outline for the quarter.— The expansion of the United States. The rise and development of industries, such as agriculture, transportation, mining, manufacture, communication.

1. The social and industrial causes of the Revolution.

2. The thirteen original states, their industries, their social and political conditions.

3. The Appalachian Mountains as a barrier.

4. The gradual settlement of Kentucky, Tennessee, and the Northwest Territory. Pioneer life. The pioneer spirit. Transportation on land and water. The work of George Rogers Clark. The Louisiana Purchase and Lewis and Clark.

5. The rise of industries. Economic, civic, and social conditions.

GEOGRAPHY

The geography of the year includes that of North and South America; its relation to the expansion of the American people.

Outline for the quarter.— North America.

1. The thirteen original states — the coastal plain, and the New England region.

2. The character of the Appalachian Mountains which constituted them so great a barrier.

3. The Great Valley, the Piedmont Plateau, and the Allegheny Plateau.

4. Kentucky and Tennessee, the states first settled west of the mountains, and the reasons why they were settled first.

5. The Northwest Territory; Ohio, Indiana, Illinois, Michigan, and Wisconsin.

6. The Mississippi Valley as a whole: the Ohio Valley; the Mississippi Valley; the Missouri Valley.

Excursions to industrial plants (see history outline), and to the north shore for the study of ravines. Out-of-door sketching, map-drawing, chalk-modeling.

SCIENCE

I. Physiology and field geography.

1. Field work: (*a*) The physiological processes as seen in different plants and animals, modified by the seasons, as seen in the field; seasonal changes; hibernation and migration. (*b*) Seed formation and distribution, considered as a means of reproduction. (*c*) Planting of small fruits — raspberries, blackberries, gooseberries, etc.— in the garden; care of seeds gathered in our garden. Geographical — map-drawing and modeling of typical topographic forms — sketching. (*d*) Gathering material for room aquaria.

2. Physiology: (*a*) Respiration: our organs of respiration, considered briefly; making and identification of oxygen and carbon dioxide; our means of respiration compared with those of lower animals and with plants; osmosis; the ventilation of the school-building and the home; work out

relation of respiration to heat and work in body; amounts of oxygen and carbon dioxide. (*b*) Digestion: our organs of digestion as compared with those of lower animals; the teeth and the juices of the mouth; effect of saliva on starch foods; experiments with saliva and starch; the stomach and its juices; experiments with pepsin; the rest of the alimentary canal and its juices; different classes of foods. (*c*) The blood — food, oxygen, and waste carrier; function of the blood; circulation as seen in a frog's foot; organs of circulation. (*d*) The muscles. (*e*) The bones. (*f*) The nerves and nervous system. (*g*) The members of the body working together. (*h*) Ideal conditions for health.

ORAL READING AND LITERATURE

Critical study of Longfellow's "The Building of the Ship;" Browning's "Herve Riel," "Incident of the French Camp;" Kipling's "Ballad of the East and West;" Thanksgiving Bible readings.

Home reading of stories giving something of the spirit of the times which the children are studying in history, such as Eggleston's *The Hoosier School Master;* a biography of Daniel Boone; a story of George Rogers Clark, and parts of Roosevelt's *The Winning of the West.*

ENGLISH

Reports and records of much of the work. As much attention is paid to the form and correctness of the papers as to the content. Principles of language which must be observed in composition.

FRENCH

Chansons de jeu: "La tour, prends garde;" "Qu'est-ce qui passe ici si tard?" "Quand Biron voulut danser;" "Au clair de la lune;" "Noël."

Stories: Study of Quebec and Montreal. Contrast between life in France and Quebec; costumes and manner of dress. Dramatic rendering of Joliet at St. Louis. Quebec. Arrival of French troups. Extracts from Molière's plays then being given at the court of Louis XIV.

Reference grammar: Part II of *Le Français pratique,* by Paul Bercy.

GERMAN

A quick review of last year's work in grammar, especially of the singular and plural of nouns, the definite article, and the use of the nominative and possessive cases. The new work will be the declension of German nouns, singular and plural, if this work can be based upon a certain knowledge of English grammar.

Reading the easier stories from *Alter und Nener,* by Seligmann. The stories will lead to talks about different places (cities, castles, etc.) of Germany. A few poems and songs will be learned.

MATHEMATICS

Working knowledge of the simpler applications of percentage and interest. New principles will be worked out at the time the pupil needs them to solve a problem actually arising in his school activities; the many uses and applications of these principles in present-day life.

Problems involved in history (the measurement of land, industrial problems, etc.); in geography (drawing of maps to scale, etc.); in woodwork and manual training (drawing of plans, exact measurement, etc.); in experimental science (percentages, etc.).

Field work: indirect measurement of heights and distances by the use of angles and triangles.

Personal accounts of expenditures for school materials. This account will be presented to the parents once a quarter, or oftener.

Problems not directly involved in their other work, but problems of the day, which require a knowledge of the principles of percentage and interest for their solution.

WOODWORK (MANUAL TRAINING)

Making notebook covers; window-boxes for winter flowering plants; drawing-board and T-square; drawing plans and making a laboratory table for the grouproom.

ART

A continuation of the study of composition and design. Out-of-door sketching. Expression work in history, geography, and science.

PHYSICAL CULTURE

Gymnasium five half-hours a week — two half-hours given to the girls, two half-hours to the boys, and one half-hour to the boys and girls together for games. Playtime at noon, games supervised by assistants in the department of physical culture. Supplemented by frequent short exercises in the classrooms between recitations.

MUSIC

Structure of the scale. Key relationships. Notation of familiar songs. Two-part exercises for sight-reading. Harvest, Thanksgiving, and Christmas songs. Songs for French and German plays and dramatic games.

OUTLINE FOR EIGHTH GRADE

AUTUMN QUARTER

KATHARINE M. STILWELL

HISTORY AND GEOGRAPHY

The period of discovery and growth of geography. Invention of printing.

1. What the ancients knew: Ideas of the Greeks. Map of Herodotus. The Romans. Pomponius Mila. Ptolemy's geography and map.

2. The Crusades: Routes of travel from Europe to the East. The crusaders. Jerusalem. Saracenic civilization. The mariner's compass. Increase of geographical knowledge. Effect of the Crusades upon the routes of travel. Rise of Venice.

3. Marco Polo: Journeys of the Polos. Geography of the places visited. Effect of these travels upon the knowledge of geography. Compare this knowledge with what we know of these regions today. Breaking up of routes of trade.

4. Invention of printing: The first printing-press. Books of the Middle Ages. Visit the Newberry Library and the library of the Art Institute to examine illuminated manuscripts. The class will illuminate a manuscript. Compare such a book with modern books. Mural paintings. Study the life of St. Francis and the Giotto frescoes at Assisi. Effect of printing upon knowledge. History of bookbinding. Visit a bookbindery. The class will bind material needed for use in the school. It is hoped they may be able to do some practical printing.

NATURE-STUDY

1. Weather observations: Daily reading of the instruments and posting of bulletins for the use of the school. Value of government weather reports. Some study of the instruments.

2. The seasonal changes: Animal and vegetable life. An investigation of some of the causes of these changes.

LITERATURE

Aldrich, *Friar Jerome and His Beautiful Book;* Longfellow, "The Sermon of St. Francis," "Venice," "Monte Cossino," "King Robert of Sicily;" Arnold, "The Little Flowers of St. Francis" (selections); Joaquin Miller, "Columbus;" Lockhard, *Spanish Ballads.*

GERMAN

1. Review of singular and plural of nouns, and the use of the definite article. The class will take up the possessive and dative cases of nouns and the conjugation of regular verbs.

2. We shall read stories from Guerber's *Märchen und Erzählungen,* Vol. I.

3. Conversation will be based upon German historical legends.

FRENCH

Dramatic: Study of children's crusade; Saint Louis, Blanche de Castille, etc.; Marseille, Paris. Reading: "Le petit Robinson de Paris," by Foa; "Sans famille," by Hector Malot. Memorizing of selections from *Modern French Lyrics,* by B. S. Bowen.

Reference grammar: Paul Bercy.

Special attention will be given to the four conjugations, irregular verbs in continual use—such as *faire, aller, pouvoir, savoir,* the plural of nouns, the formation of the feminine of adjectives, the formation of adverbs, the irregular comparative forms of adjectives and adverbs, negative words.

MATHEMATICS

Mathematics will be taught as its use is required in other subjects. A knowledge of longitude and time, and of how to find latitude and to measure angles, is necessary to the geography. The building of the toolhouse will furnish an abundance of material for number and form work, and many lessons will be based on this subject. In addition, all previous work will be reviewed, and viewed as generalized number.

MANUAL TRAINING

I. Mechanical drawing: Simple geometric constructions, leading up to more complex drawing, such as orthographic and isometric projections. This is to be a preparation for the detailed drawing of the interior of a toolhouse which is to be built on our campus by some of the children. In all the drawing articles actually to be made in wood by the children will serve as models.

II. Woodworking: The making of Christmas presents. This work will be purely individual. The children, after a conference with the teacher, will make a rough sketch for proportion and outline, and after reducing it to a mechanical drawing will make it. The child will pay for the lumber, finish, etc., used in making the present.

III. Sewing: The girls will devote two hours per week to sewing. They will make articles of clothing for their own use.

MUSIC

Study of chromatic and harmonic minor scales. Part-songs with introduction of bass. Unison songs. Composition of original melodies.

Songs: "September Gale," Eleanor Smith; "A King in Thale," Zelter; "The Crusade," Franz Schubert. Thanksgiving songs: "Wake, Viol and Flute!" E. Richter; "Harvest Hymn," Sir George Elory; "We Plow the Fields," Gläzer; "Song of the Corn," E. Dalcroix. Christmas songs: "Ye Shepherds, Arise!" Karl Reinecke; "O, heiliges Kind," German folksong; "Now He Who Knows Old Christmas," old French carol.

AVENUES OF LANGUAGE-EXPRESSION IN THE ELEMENTARY SCHOOL[1]

DELLA J. LONG
The University of Chicago

In considering the place of language in the school, the fact presents itself at the outset that there is no significance in language apart from the function which it serves; that there is, in truth, no such thing as language by itself. For language has grown out of the instinctive desire for expression which is so great a part of the social self, and out of the evolving needs of man which could be met alone through communication. Wherever conditions of social intercourse exist language must inevitably develop. It is a pervasive element of human life, running out from every part of our thought and feeling and activity.

It is with the aim of perfecting this natural growth that provision is made in the school for language-study; but the limitation of this provision to a few lines of subject-matter and to certain periods in the day is made with a view to the restrictions imposed on the public school by its size, not in relation to the true function of language or to its natural process of growth. Such restriction is, perhaps, necessary; but these special "avenues" which we are forced to select serve their purpose only so far as they grant the same reason for language in school as in the world at large; that is, a desire in the individual to communicate some part of his own interests or to share those of others. The term "expression" sometimes seems to imply the mere putting forth of thought, but it is impossible to conceive of any natural expression whose very reason for being does not involve relations with others.

The primary period is the time of all times for language-development. During these years the social and other objective interests which express themselves largely through language are at their height; the time of reflective thinking, when independent effort increases and outward expression becomes less necessary, has not yet dawned; nor have the reserve and shyness of the later years of childhood developed. This is the time when children love to talk. They come into the distinctive inheritance of the race in the most direct way possible, by plunging into the use of language as soon and as fast as the need for it is felt.

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[1] Paper read before The Elementary Department of the National Educational Association.

The two factors in this acquisition are the hearing of speech and the child's own speech utterance. The two work together, the utterance objectifying the auditory images, testing them over and over, and so developing and co-ordinating the speech organism. All through this period the ear is the organ of sense-appeal. It is the organ through which the feelings are most stimulated—and this is the time when feeling is the dominant force—and the only means by which direct contact with language is reached.

On this basis an earnest appeal is made for *oral* expression in the primary school. The interpretation of symbols through the eye is a later development, and the writing of these symbols adds to the complication. Reading and writing have their beginnings in the primary school, but they depend upon a free and continuing use of oral language, and are only an outgrowth of it, and a small outgrowth, all through this time when the foundation itself is forming. It is not unusual, however, for much of the "language work" even in the second and third grades to be written. Aside from the reversal of the natural order in this, the nervous strain is very great in the effort for mechanical accuracy before either muscular growth or general co-ordination is equal to the task.

As to the content of what is expressed, if we believe that language has educative significance only so far as it helps to carry on phases of the life of those who use it, the question is answered. Then any interest or activity native to the child of the primary school is a natural avenue for language-expression. So far as we allow the children to increase our knowledge of what these inherent interests are, we have an increasing basis of choice.

First of all is the absorption in the objective working out of life — play, and the constant doing of things. From this clue the hand-work and co-operative construction in the school have grown. And in all this language is the natural accompaniment. Making the playhouse or the garden, modeling a village or weaving a basket, demands interchange of ideas, the explanation of plans and means, and the social intercourse in itself so essential at this age. Nor is the language in connection with all this merely haphazard. The direction given, however, arises from the demands of the activity itself. For example, success in results is found to depend upon saying exactly what is meant; an increased vocabulary is needed; and interpretation of plans and directions and records becomes necessary.

This same kind of activity, although without so much organization, fills the child's life out of school, and it is only fair that he be given in school an opportunity to talk and hear about what is of the greatest possible importance to him.

The story must always be a source of inspiration for the child's growth in language, if alone for the reasons that it is an inherent demand of the little child and that it allows him to hear the language spoken. For the need of hearing a very great deal of speech can hardly be overemphasized. That the language he hears be of the best and beautifully spoken is most essential, since his ear will never again be so susceptible to nice differences of pronunciation and enunciation.

Because a child loves to hear a story over and over, it does not always follow that he is ready to retell it himself. Part of his enjoyment lies in the story-teller's mastery of the language and in the sound of the words, and largely through the simple and beautiful language of literature that first vague sense of beauty and delight in artistic expression is to begin. When the thought has been so absorbed that the child has a desire to express it again to others, and when he has sufficient language-control to do this with satisfaction to himself — that is, without self-consciousness — the retold story is not mere reproduction, but becomes something given by the child himself.

The aims of the literature in the primary school are often largely defeated by demand for constant reproduction, especially by the great amount of written reproduction in the upper primary grades. We have all seen classes, after reading or listening to a fine story, and proving by their discussion an appreciation of its essential meaning, turn listlessly to the writing of it. There would seem to be more reason, and so more inspiration, in the simple compositions which have their origin in what the children themselves are doing, as has been suggested, and in certain phases of the nature-study.

Since the elementary science deals with relations whose acquaintance the child makes for himself, it is inseparable from language; for language is a most convenient and available tool for probing into the facts of the real world about which children are so curious. There is one tendency in the treatment of the nature-study, however, which detracts from its value as a means of language-development; that is, dealing with the various nature elements in terms of human experience and human relations until those terms become merely conventional symbols.

The primitive poetry in giving human feeling and purpose to the wind, streams, storms, etc., is fundamental in the race, and often appears in the child's own interpretation of nature; and certainly the little child understands the nature-processes by analogy to his own life. But to continue the phraseology of the beginning nature-study too long seems highly artificial. Nor is the imagination of the child appealed to by the mere giving of unreal names to familiar objects. His fancy rather enables him to conceive of unseen forces as realities, and to compass great stretches of time. In a way, he is better able than are we to grasp the story of the great building process that began the earth and made the rocks or the soil. Such subject-matter, dealing with the very processes of life itself, has peculiar fascination for children, and the language through which it is thought out must, from the nature of the thought-content, be charged with vitality and fulness of meaning.

Although there is a universal theory that language-training below the high school should come principally through the work and the life of the school as a whole, a large part of the time assigned to English is still devoted to the study of grammar. That the reward of much of our grammar-study is so slight is largely due to the fact that our English grammar still rests on a Latin conception. The inflections have largely disappeared from English, and still many grammars continue to regard them as an important element. When the time comes for the study of the relations between words, sentences, etc., we should be able to presuppose a considerable power of abstraction in the pupils. Much of the grammar prepared for the grades nevertheless goes beyond the power of students below the high school. That the study of the science does not assure ability to use language is shown by the meagerness of language, both spoken and written, of students who have been brought up on grammar, but who have not been accustomed to express themselves freely or to hear good, efficient English. The premature study of structure, moreover, given before experience with realities has been sufficient to develop interest in structure, prejudices pupils against a study which should have value later. This does not imply a disparagement of grammar-study. I only mean to say in this connection that my observation in the intermediate and grammar grades has not made clear the relation between a knowledge of the technique of language and a full, free development of power to use the language.

There is, to be sure, more need of form-study in the upper grades, since the increasing field of thought brings greater need of understanding the possibilities of language for expressing finer differences of meaning. But this knowledge of structure can come only through considering the word or sentence in the closest possible relation to the thought it conveys. If the child could once understand that he studies the relations between words because he can, thereby, make them a more efficient medium for his own use, not because there is a system of relations inherent in the words themselves, the feeling of remoteness, of unreality, about this technical study would surely be lessened.

In the upper grades literature and art have a still larger place in bringing in both the thought of the great world and models of perfect expression; and often the poem or picture, when it has served this purpose, is made the basis for testing some bit of the technical knowledge just referred to. For several reasons, this is an unfortunate use of a work of art. There is a great dash to the feelings in dropping suddenly from the inspiration of something beautiful to a survey of the outer form of that beauty. To make a list of nouns from a stirring poem not only perverts the purpose of the poem, but brings a disfavor upon the nouns which they do not deserve. For interest in them can come only through learning of their use, and this is to be discovered in the very act of their service, not in disembodied lists.

When pupils come to a conscious scrutiny of language, the cultivation of a feeling for the word that gives just the shade of meaning or the full force of an action, learning to appreciate the greater strength in directness, the habit of clear imaging, recall of parts read which have made special appeal — all this goes with the discussion of acts and motives and the use of personal experience in interpretation. Of all this, the habit of imaging is most important in the development of language through literature. This means, of course, not merely visualizing, but includes all the unconscious motor expression so characteristic of children.

At this time, when verbal memory is at its height — that is, in the intermediate grades — the beginning of a permanent literary store may well be made, but there is a dissipation of energy in "learning by heart" anything that does not come within the true meaning of that phrase. If we could reduce the number of fragments committed to memory, choosing instead a smaller number of entire poems, we should, perhaps, be surer that they would last as a permanent source of pleasure. A small girl of my acquaintance innocently alluded to the "memory jams" she had been learning, little appreciating the fineness of her phrase.

If we were to sum up our perplexity over the written work, would it not be that the results show perfunctory effort? There are, of course, always special cases where genuine interest is unmistakable; but, on the whole, it is clear that the aim of the written work is to make the use of correct form habitual. When we attempt to explain the lack of spontaneity back of the written pages, we are again confronted by the futility of pursuing language-culture through the composition as a means in itself. This is made plain by the fact that when the child recognizes a genuine reason for his writing, it becomes a genuine effort on his part. This does not exclude the observance of correct form, but makes it a subordinate part of the aim. So long as there is a real interest in the writing from the child's point of view, the subject is a minor matter. But writing for the sake of writing, on the theory that "practice makes perfect," precludes the motive which alone gives language value. There must be some outcome beyond the page written; for example. the letter that is really mailed to someone with whom the writer has a personal relation of some kind, not merely an artificial, literary relation.

Individuality develops rapidly during the grammar-grade period. New interests are springing up continually. The subject assigned to an entire class appeals less and less, which adds to the problem of selecting subject-matter that shall meet with a genuine response. This suggests in part the solution of the difficulty; namely, that we reduce the amount of written work. In support of this is the fact that pupils at this age are naturally conservative. Free, easy expression is no longer characteristic. And while the self-consciousness and the shyness and awkwardness of expression are quite apparent, the increase of mental activity and of assimilation are not always so clearly recognized. It is a time of absorption and storing up, and all that is assimilated will appear sooner or later in increase of individual strength.

Summing this up, the communication of the native interests, worked out through all the activities of the elementary school, is the natural basis of the language, and the educative value of language-training rests on a recognition of the fact that the thought-content and the interest in communicating or receiving that content alone give meaning to language. The primary aim in the language of the elementary school is the development of power to say freely what is pressing forward for expression in the child's mind. The aim in the study of structure is that language may become a more efficient means for this expression. And the basis of all language-growth is oral expression.

This is but saying that language is not merely a system of symbols which the child is to regard as already organized outside of his own life, but that it is a part of his own mind and heart which is to grow as he grows.

THE SOCIAL LIFE OF CHILDREN[1]

MRS. PORTER LANDER MACCLINTOCK
Chicago

Nothing more beneficent has come into modern education than the tendency to obliterate the distinctions between a child's school life and the other aspects of his life. Our debt is incalculable to those great teachers who have seen, and have taught us to see, that the whole life of the child is social, that the whole life of the child is educational — that it should be one harmonious piece of experience, flowing naturally on from home to school, from family to friends and teachers, with no jars and no segmentation. We cannot fail to see that in the large sense of "social," all life is social where people — even two people — are adjusting themselves to one another and co-operating in living. We have all learned to see too that ideally, social pleasure, like every other pleasure, should arise out of normal and natural activities — should come as a by-product, an efflorescence, of our association with our fellows in some interest or activity. This is why we find the best society in Chicago at Hull House, in the studios, in the morning conferences at the club, rather than at the afternoon tea, or the formal reception, where we go seeking pleasure.

It would, then, be quite ideal if it were possible to associate the child's social experience inseparably and joyously with his school experience and his family life. The family and the school, well and liberally organized, wisely and generously conducted, should, ideally, so fill the child's life that there would not be vacancies left to fill with society as society. But the home and the school are not well and liberally organized, nor wisely and generously conducted. Many homes are barren, either poverty-stricken or slipshod, and are therefore unsocial; many homes are luxurious, elaborate, filled with an atmosphere of servants and functionaries, and are therefore antisocial. The school life of the children, especially of the older children, but running back far into the elementary school too, is professionalized and technicalized, made into mere learning and not living, built around an elaborate and unsparing system of competition, until it is not only both unsocial and antisocial, but scarcely human.

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[1] The substance of this paper was given as an informal talk before the Educational Department of the Chicago Woman's Club. Moved by pressure, apparently sincere, from many friends, and by the kind urgency of the editor of *The Elementary School Teacher,* I have written it out from my notes, well knowing that it has not by that process been transformed into a magazine article, but remains by nature an informal talk. I claim for it no originality. It is merely a practical presentation of ideas and hopes gathered from many sources — ideas and hopes that have been discussed so many times with friends, especially Dr. and Mrs. Dewey, Mr. MacClintock, and Mrs. Harding, that I cannot by any means tell what is mine among them and what is theirs. If any of them, or of the many others to whom I am indebted, chance to see this paper, let them claim their own property, if they can recognize it.

So, however unwilling we are that it should be so, we must acknowledge that the recreative out-of-school life of our children has been erected into a sort of institution, modeled upon adult "society," having its own machinery, its ceremonies and events. It is this specialized recreation, as distinguished from home life and from school life, that we must handle, gently and gradually transforming it, if possible, into the thing we should like it to be.

Each school and each home has its own problems to deal with in this as in other matters. It is in these matters of specific detail that the problems become acute and vexatious. When we talk in general about the social life of children, we are obliged to handle it in so large a way as to seem well-nigh unaware of the specific individual problems. But there are a few fundamental principles everywhere applicable, in the light of which the difficulties that inhere in special situations and minor details grow smaller or disappear. It is comforting and reassuring to talk together over these principles and their application.

The first principle of the social life of our children is that it should be democratic. There are reasons of several different kinds for this. In our day everybody that is not a democrat pretends to be. It is a pose, where it is not a sincere attitude. Bernard Shaw says being a revolutionist saves a man from being bored; so posing as a social democrat saves many a modern man and woman from ennui. It gets one the pleasantest possible introductions to the most distinguished people. It forms a base from which one may launch the newest and most knowing irony and satire at the established order of things. We have quite reversed the witticism of the man who said he preferred to vote with the Whigs and live with the Tories, so that, however piously we may vote with the conservatives, we like to live or to be known to live, with the social democrats. So many of us are obliged merely to pose as democrats for the reason that the last few generations of Americans have been so strenuously trying to forget that as Americans we are democratic, and have been so laboriously taking on the airs and customs of the aristocracy that we find ourselves, now that democracy is in fashion, actually embarrassed with those notions of exclusiveness that we and our fathers, and in some cases our grandfathers, assiduously cultivated. But the society of the future — that future for which we are rearing our children and our children's children — will, if we are wise and honest now, be really democratic. It will not be necessary for them to pose. Of course, we can never have again the old democracy of ignorance and inexperience; but our children's children will see a better thing — a reasoned, conscious, artistic, religious democracy, far on the road toward the brotherhood of man.

The best of it is that children are natural democrats. Until it is pointed out to them by their elders, they make no discriminations on the ground of extraneous characteristics against other children who happen to be interesting to them. Now, the basis of this society for our children is providentially and most naturally provided in the school. It is here and only here that many sorts of children from many kinds of homes come together freely and naturally, as mates and equals. Here they meet upon an impartial footing. Here, quite as it should be in an ideal democracy, they must learn to know and respect one another's qualities, regardless of the accidents of manners and appointments.

But before we can do much to foster and extend this charming social condition we must free ourselves from certain ideals that have long loomed large within our own social and domestic horizons, which have, indeed, seemed to many people — sentiment-intoxicated men and timorous women — the very beacon lights of human society. It would require a very Ibsen to reveal to us all the harm these high-sounding, enthusiastically supported ideals are capable of doing. The first of them is expressed in the phrase "the sanctity of home," or some such. When this means, as it may so easily do, the selfish exclusiveness that leads us to shut up ourselves and our children with a very few chosen friends within a refined and closed circle, and to shut out all others not refined and selected, then it means that the home is not co-operating with the other institutions for the bringing in of the divine brotherhood; that it stands as a bar, a block in the road of advance. Now, I will not be misunderstood as an iconoclast who would crassly tear down the true sanctities and privacies of home. Neither will I lie for a moment under the more galling imputation of promulgating that bit of evangelical sentimentalism that would advise us to invite into our homes "the poor" or "the uncultivated," that we may comfort and enlighten them with glimpses of refinement. Nor would I tolerate for a moment the idea that we should train our children to extend charity or social favors to those "beneath" them. Nay! ideally we are training our children for the social day when snobs and philanthropists will be equally superfluous and equally unacceptable, because equality and justice (plain as they sound) will have rendered them both impossible.

This charitable and philanthropic prepossession will be the very hardest to shake off. But we must do it, and invite into our homes these friends our children make in the school or in the settlement, as friends and equals. And they always give more than they get. Though, of course, the courteous and generous home is a vital glowing center whose sanctities are not hidden, but active, fearing no violation or contamination; and it does dignify and cultivate its guests.

Another ideal which we must modify or let slip is that of the sacredness of our children's manners and morals. Many a mother builds up for herself a delusion on these points — an image based upon cant phrases and mere sentiment, of the little paragon she desires her child to be; and, with a cruelty and narrowness of which only the idealistic mother is capable, she labors for years to produce him. She forgets that manners superimposed are hypocrisy, that morals unchosen and untempted are also unsafe. Now, again, I refuse to be understood as approving or applauding a rude or vicious child, or as advising people to let their children grow up savages. Only a newspaper reporter could so misinterpret my statements. But I do insist that the child should have a right to make some of his manners to suit his own occasions, and a right to choose sometimes in the matter of his morals. Further, as in the case of the home, if we are bringing up our children aright, we shall have fortified them against much contamination before they are exposed to it. We shall have made of them dynamic forces for good, not left them helpless victims of evil influences.

We must teach them to look below the mere surface rudenesses and coarsenesses of children they are obliged to know, as we must do in our own world, to the real person beneath. Children are, as a rule, much keener sighted in this than we are. If ever you sympathetically investigated some "undesirable" friend your child had picked up, to whom his soul seemed to cleave, you have pretty certainly found that behind the disreputable sweater was a big human heart; that the grimy little paws knew how to do interesting things; that there was a reality, a pungency, a "ginger" in this small democrat that you, and certainly your child, never found in the patent-leather-shod friends he met at the dancing-school. It is a criminal thing to blind and defeat this power of insight in a child, and lead him to choose his friends by their appointments and their mamma's street numbers. And we must ourselves learn to look more lightly at the more superficial manifestations of manners, morals, and speech, and not to fall into a flutter at the appearance of undesirable symptoms in our own children, as if they argued incurable contamination. Speech too good, manners too perfect, make a pariah of a child in the playing-field. He knows this, and it is a sad day when he consciously adopts one code for "the kids" and another for his mamma's four-o'-clock tea. I have heard an epigram, which like all epigrams, is not more than nine-tenths extravagance or flippancy: "Every boy from seven to twelve is either a pig or a prig, with this difference — the pig is curable." To be a true social democrat, and to bring up our children as such, we must lay by some of our fears for the frailty of their manners and morals, and must cultivate a simpler, heartier ideal, so that we can tolerate in our homes and as playfellows with our children many other people's children whose speech and manners we ourselves have not formed.

We should welcome heartily the tendency everywhere visible to make more of the schoolhouse and the interests of school as a social center. It would be quite ideal if the school were a sort of children's club, or if attached to every school, or within every school district, there were a children's club-house and playing-fields where the children came together in some interest not strictly disciplinary — dramatic work, music, physical culture, exhibits of their collections. All such interests afford sane and wholesome reasons for social communion. Behind every school there should be an association of parents and friends of children, unobtrusively active, making practical and safe such social possibilities, and at the same time immeasurably enriching their own social experience.

Of course, every child is entitled to his own inner circle of friends — those congenial spirits whom he asks to family festivals, with whom he spends long afternoons in the solitude of two or three or four. But he could easily and profitably have this larger contact with many kinds of children, if we only had the facilities for utilizing the opportunities of school.

Our children's social life, however it may express itself, should be organized and conducted with simplicity. By this we mean, first, simplicity as opposed to complexity. The business of the child up to his second year in high school, and perhaps beyond, is that of acquiring in a single-minded, leisurely way the broad, fundamental things of knowledge and character. But just as this fact is ignored in most schools, and the children are found "fussed" and distracted with minor matters of subject and technique, so it is ignored in the home, and the children, like the parents, are loaded with engagements and social duties. We owe it to our children to secure to them their long childhood. We should passionately keep for them their leisure, their long hours of time. We cannot too much deplore the restlessness some people feel to have their children experience all there is of life. It is deplorable to thrust a child untimely into a mature experience, and forestall or force the beautiful ripeness of each stage of his life. To take the child to the theater — the theater "as is" — to grand opera, to concerts where he hears difficult music psychologically twenty years beyond him, to evening parties, is to wrong him mentally, morally, physically, socially. There should be drama for children; there should be many more of the concerts for young people, which Mr. Thomas knows so well how to arrange; but the children should not be thrust into artistic and social experiences suitable only for their elders. Above all, they should be spared as long as possible the appalling complexity, the depressing too-much, which makes the lives of their elders one ignoble scramble, or a constant series of volitional upheavals of choice-making.

We mean, in the second place, simplicity as opposed to costliness. Well-to-do and experienced people know that there can never be any true democracy among the children or elsewhere, so long as they flaunt the signs of their difference — fine clothes, much spending-money, luxurious appointments. Everybody knows, however, that this is a delicate and difficult question. Clothes should be good and serviceable and tasteful. Unfortunately, the matter of their tastefulness is partly a matter of fabrics and materials, in which we are in the hands of the manufacturers, who seem to have agreed to do their worst for us in making cheap materials as undesirable as possible in color and design. Here, indeed, is a legitimate crusade demanding the eloquence and enthusiasm of some eloquent and enthusiastic woman's club.

But it is not so difficult to know where "finery" and indulgence begin, and it is the artistic ugliness and the immorality of finery and indulgence that balk education and estop democracy. It is indulgence and luxury, the offensive too-much, that set a man or a child apart spiritually from his fellows, and make him a social leper, shunned and infectious. Any woman with even a little wisdom can, if she will, arrive at a standard of relative —

yes, of absolute — uncostliness, and apply it. She can at least refuse to subject her boys and girls to the frivolous, the criminal, observances of the changing fashions. Many an unfortunate child, in her dress, her parties, her very toys, is merely a "conspicuous consumer" for her mother; she demonstrates that her mamma "knows how." To this cheap triumph, this selfish and trivial pleasure, many a woman sacrifices her child's peace and harmonious growth, and places a barrier to a true social life. We have all seen children returning from what ought to have been a simple, naïve child's festival — a birthday party, perhaps — loaded with dollars' worth of favors and prizes and place-cards, but, worse still, loaded with the bitterest burden one has to bear, that of a social *duty,* a competitive hospitality. Such things as this all parents can examine with a fresh access of consciousness and of conscience, and arrive for themselves at a standard of true simplicity.

We mean, in the third place, simplicity as opposed to artificiality. For us grown-up people ceremonies and social technicalities have a certain place. With the world clamoring at the telephone and the door-bell and the letter-box, we are forced to hedge about our leisure and our privacy with sundry difficulties of access. With so many people to meet and meetings to attend, we are obliged to establish a certain technique for the mere ease of doing it. Of course, we know, too, that we can never have again the unconscious and unsuspecting simplicity of a primitive society. Whatever simplicity we win for ourselves must be, like our democracy itself, the result of conscious, reasoned conclusion, the fruit of experienced taste. Can we not spare our children as much as possible of the technicalities of social communion, permit them to enjoy, as one of the privileges of the American, the very minimum of professional etiquette? As much as fine clothes, the manners and customs of a conventional society shut in the adepts and shut out the uninitiated. If we are sincere in our desire to help our children to the advantages and privileges of a new social democracy, we must see that these barriers are not erected. The very stronghold and college of conventional and artificial manners and practices is the dancing-school. Therefore we find all serious mothers reacting against the regulation dancing-school. Dancing the children should have. But it should be taught in the school as physical culture, or in little friendly classes in the home — always under natural, simple, untechnical circumstances, in the care, or under the eye of some one who knows psychology enough to choose real children's dances, and sociology enough to prevent the undemocratic degradation of the girls and the antisocial exaltation of the boys. No proficiency or expertness in manners is worth making this sacrifice for.

These principles — a true conscious democracy, simplicity in all its aspects applied under the joyous and loving guidance of parents and teachers — will go far toward securing for our children a sound and promising social life.

PARENTS' AND TEACHERS' ORGANIZATIONS

HELEN M. HEFFERAN
Chicago

The home is the mother of the school which has practically disowned it. They are often rivals and frequently antagonists, when their relations should be friendly and harmonious, the one supplementing the work of the other. When the teachers are thrown into personal contact with the parents, a human interest is developed and we have a true school.

A great educator states that the new movement — child-study — so largely American in its origin, was the chief movement, both in psychology and education, of the century just closed. Tabulated reports of widespread investigation drew the parents' attention to the fact that a scientific study of the child was being made.

The Illinois Society for Child Study was an outgrowth of the movement, many round tables for child-study having been organized in this state under its auspices. The National Congress of Mothers, formed in 1896, was another organization built upon this movement for child-study. From the National Congress of Mothers were organized the state congresses, the supreme object of these being to establish parents' clubs in connection with the schools.

Usually the organization at first was a mothers' club, but the need of a broader scope soon led to the wiser plan of parents' clubs. These brought the parent and teacher together to confer on subjects vital to the best interests of the child. There are about twenty-five of these parents' clubs now in Chicago in connection with the different schools, there being fifteen on the South Side alone.

These clubs are officered by the patrons, work under simple by-laws, and have nominal dues to defray the expenses incurred during the year. The teachers assist in planning the programs, and are *always present* at the meetings (both afternoon and evening) to participate in the discussions and meet the parents socially. The programs include such subjects as "The School Curriculum," "Home Study," "Training in Civics," etc., but the supreme motive of all the work is to bring the home and the school into closer and more harmonious relations for the benefit of the children.

Each club does practical work for its school through committees such as "Buildings and Grounds," "Kindergarten," "Manual Training," "Domestic Science," "School Decoration," etc., and in this way schools have been equipped with manual-training and domestic-science plants, pictures, flower-gardens, stereopticons, lunchrooms, and fire escapes.

One club has a membership of over three hundred, embracing sixteen nationalities. In the schoolhouse (the most democratic of all institutions) these people meet on common ground, where all differences of religion, nationality, and social position are obliterated and the teachers discuss with the patrons of the school questions of vital interest concerning the welfare of the children. At a recent evening meeting of this club some four hundred and fifty parents were present. The program included brief talks on elementary methods in reading, number, and nature-study by two of the teachers, brief talks by two lay-women on some essentials in child-training, and talks by two physicians on food and sleep. Refreshments were served at the close.

The movement is not confined to the grades, as some very successful organizations are to be found in connection with the high schools. It is difficult to say which will be helped more by this co-operation — the teacher or the parent; but this we feel sure of — the benefit to the child.

There are many instances where the conditions are right for the development of an educational spirit in the community, but those in charge make no effort to bring about this most-desired end. Especially is this true of our high schools, where a complete isolation exists, and where our boys and girls are today, as in years past, in the grip of the textbooks, recitation, examination, and credits.

We want something more than a *passive* interest on the part of the parents. The social and educational forces of the community should be brought together to work out a better curriculum for our youth.

Many organizations of lay people are eager to bring this about, and are in correspondence with educators throughout the country, asking for suggestions and advice as to how to further the work. Dr. G. Stanley Hall contributed to the Education Committee of the National Congress of Mothers the following suggestive topics for discussion by co-operative associations of mothers and teachers of high-school boys and girls:

I. Occupations and amusements outside of school:
  1. Time devoted to housework, sewing, music, fancy-work, chores.
  2. Time devoted to social life, theater and concerts, outdoor occupations and athletics.

II. How much home study should be required of high-school pupils?
  1. From parent's point of view.
  2. From teacher's point of view.

III. Food: school lunches; tea and coffee; candy and soda habit.

IV. Sleep: average number of hours; time of going to bed and rising.

V. Health: general conditions and special cases. (Teachers are rarely given information on such points by parents.) School headaches — are they due to conditions in or out of school?

VI. The boy-and-girl question: How can the most normal healthful conditions be secured?

I believe the time has come when more attention may wisely be given to the utilization of forces outside the school, to the end that community life may be richer and better directed, and that the schools may gain the commanding position that rightfully belongs to them.

THE MEETING OF THE PARENTS' ASSOCIATION

MRS. FRANK HUGH MONTGOMERY
Secretary

The November meeting of the Parents' Association was held on Thursday evening, November 17, in the Manual Training Building. From 7:30 to 8:30 o'clock the shops were open for inspection, and students were at work. The large number of parents present showed their interest in the opportunity to see the unsurpassed equipment of the manual-training part of the school.

At 8:30 the parents gathered, nearly three hundred strong, in the assembly room. The president, Mr. Heath, in opening the meeting, emphasized the purpose of the association as in harmony with the teachers in co-operating in the education of the children. He believed that it would become a permanent and powerful organization, that it had now great harmony, and that the desire of all was to make it even more harmonious. He said that its motto should be "faith, hope, and charity"— faith of the parents in their children because of their parentage, hope in their work, and charity of the teachers because of the children's parentage.

Mr. Heath then introduced the first speaker, Mrs. William Kent, who spoke on "Social Life in the Home." Mrs. Kent said that there was on the part of many a feeling of reaction against problems so often brought forward that she wished to refrain from using the expression "needs of the child," but that it was possible to take sweet counsel together in a simple and elementary fashion, and with the desire to be less self-conscious. She thought the secret of social life in the home was in doing things together. Children did not have enough of the society of their parents and brothers and teachers. Parents did not have time to enjoy their children. Children came to think of their mothers as people who insisted upon looking after hands, nails, teeth, and hair in a very tiresome fashion, and with their fathers they did not have even that acquaintance. Parents often tried to have their children surgically clean, when all that was necessary was to have them hygienically clean. She advocated reading aloud and doing things together in a saner, wiser way. But children needed the society of their equals. The parties should be simple, and there was no need of dressing up; but it was wise to plan some entertainment, or it would deteriorate into a rough house. She closed with this quotation from Emerson: "It is easy in the world to live after the world's opinion; it is easy in solitude to live after our own; but the great man is he who in the midst of the crowd keeps with perfect sweetness the independence of solitude."

Miss Katharine M. Stilwell then spoke on "Social Life in the School." She named the group as the factor in organized plays and games, with physical training, both indoors and out, to unify the work. The games offered skill, endurance, dexterity, and alertness. They tended to break down class distinctions, had advantages for all, both girls and boys, and general good conduct was a result. In the more formal social life, as parties and receptions, the pupil looked for pleasure and the teachers for education. The instructors found it a means for training in simplicity and good taste. For the entertainers there was development of initiative. Work was planned for all. Unsuspected talents were often discovered. The suppression of one's individual interests in the good of the whole was a natural result. The working together of teacher and pupil engendered harmony. The rudeness of the adolescent boy was often only self-consciousness, and the remedy was obvious. The form of entertainment should vary with the guests, and there should be great variety so that all might find interest. The luncheon had been found to be a good form of entertainment. It might be given by one group to another, or by pupils to teachers and parents. The social party in the school had a distinctive rôle, for all were invited and the home party was more or less a class affair. In the school it was democratic. In the elementary school the room organization was sufficient. In the high school literary or dramatic interests in addition were necessary. At present there was an isolation between elementary, high, and university pupils. There should be a common meeting-place. The presence of the younger children was a benefit to the older. Such a meeting-place was the morning exercises which grew out of the work and were in charge of the different classes in turn. The emotional and dramatic found expression there. It was no place for the bright child to show off. He was only part of the whole which must act in unison to have happy results. She ended with a recapitulation of the points she had made and with a plea for recreation as an ethical force.

The third speaker was Mrs. Porter Lander MacClintock, whose subject was "Substitutes for Fraternities." She said that a problem in the social life of the child arose only when the school and the home did not meet the need. She was not aware that the Parents' Association had ever appointed a committee to consult with representatives from the fraternities whereby they could learn why the young people cared for these associations. In reply to her own inquiries, she had found that perhaps what they did care for in fraternity life was the smallness of the company, for they liked to choose their own friends, and the spirit of loyalty, which raised the question: Could there not be other things to which this loyalty could attach itself? She thought that in the high school the social life should arise out of something to do, as music, dramatics, or the various collections which young people always like to make. The university requirements were always staring the pupils in the face and giving them scant leisure for other things. Might it not be legitimate to ask for some lightening of the burden and for more of the social occupations? The high-school pupils had by no means outgrown the love for them which they brought with them from the elementary school. The whole question was hampered by no room which the pupils could use for their social life. They had a natural feeling for privacy and seclusion. They might have an adviser from the faculty of their own choice, which would tend to promote harmony. Why would it not be possible to make use of some of the schoolrooms in the evening, and could there not be co-operation between parents and teachers so that all the time of the pupils would not be taken up with studies? She thought that the School of Education had approached the matter of fraternities in a wiser way than some. It was a subject for the most delicate and sympathetic handling, so that the breach which so often existed between parents or teachers and children of the high-school age should not be widened. The young people did love those organizations which they had themselves got up or copied from their elders, and the matter ought to be handled most delicately. These organizations have been taken away from the young people. It was necessary to go about providing occasions and interests upon which and around which they might come together. It should be seen to that the suspicion of parents in general on the part of the high-school pupils be lessened, and the practical means for the social life of the children should be supplied. Parents should encourage social life in their own homes and try to make the home gatherings more democratic without cultivating snobbishness or self-consciousness. The parents should certainly arouse themselves to do something.

Mr. Heath called upon Dr. E. Fletcher Ingals to take part in the discussion. Dr. Ingals urged games at home and all the social life possible with the children out of doors. The great thing was to make a companion of one's child, to consider his rights, and never to discipline him by an untruth. As substitutes for fraternities he suggested the various athletic clubs, the clubs in connection with the school, and the family social clubs to which the parents belonged and where children were welcome.

At the request of Mr. Heath, Mrs. Sproeule spoke of the social life of the child up to the age of ten. She thought that it should consist of play, free and undirected, in the home. All children knew when they were playing to order and were hampered by it. They should be free in their play at home. There was great joy in the birthday party and in an exchange of visits with meals. Her aim would be to encourage free play and self-direction.

At the request of Mr. Errant, Dean Owen was called upon to speak. He said that in promoting the social life of the parents' meetings the social life of the school was promoted; that in regard to the fraternities last year there was no ill-feeling, because the change had been brought about through discussion with the parents, and it did not have to be gone about by a method of indirection. At a recent conference of the principals of all the high schools in the Middle West all were in favor of abolishing the fraternities, not because they were necessarily bad, but because they stood in the way of something better. He said that a committee had been working for two years on the subject, and that he was sure that a way would be found of promoting the social life. He advocated the various clubs already existing, and which could be strengthened and broadened, as a means of bringing the best results to the individual in an institution where six hundred young people spent three quarters of their time in school. At present the organized clubs were not inclusive enough. He mentioned the very successful Hallowe'en party which the school had recently had. He wished that there was money enough to organize all the dancing lessons which anyone would need or ought to have—an arrangement which he thought would tend toward simplicity.

Dean Wilbur S. Jackman announced the concert to be given at Mandel Hall for the Elementary School children, their parents, and their friends the following afternoon.

Mr. Heath announced the topic for the next meeting as "Methods of Work," and said that the notices would be sent home by the children instead of being forwarded by mail.

WORK OF THE HOME COMMITTEE OF THE PARENTS' ASSOCIATION

MRS. WILBUR S. JACKMAN
Chairman

An attempt is being made by the Home and Education Committees of the Parents' Association of the School of Education to organize the work with the parents and teachers in such a manner as to place each in touch with what the other is trying to accomplish, to the end that the home and school may in truth supplement each other. The following plan of organization has been effected, and in accord with it the work of the year has begun. The chairman of each committee, appointed by the general organization, selects from the patrons of each grade a chairman, who in turn invites someone to act as secretary. A meeting of each such group of parents is arranged for at the School or at one of the homes, at which the program consists, in the Home Committee, of a half-hour's informal talk by the teacher on the work she is planning to carry out for the ensuing month. Outlines may be presented, suggestions made for supplemental reading or excursions, and advice given as to assistance where the children may most need it. Opportunity is offered for questions by the parents. This is followed by a more formal presentation by someone, invited for the occasion, of a subject bearing directly upon the problems of the home or the relation of home and school. A discussion then follows in which those present freely participate. Tea is served and the meeting resolves itself into a simple neighborly chat, the one topic of common interest still being the child. The secretary makes a careful report of each meeting; these reports will be framed into a general report at the end of the year with a view to making definite suggestions bearing upon the curriculum.

The following is a program of the Home Committee arranged for a meeting of the parents whose children are in the second year of the high school:

GENERAL SUBJECT: RESPONSIBILITY

1. The work of the second year. How much home study is necessary?
2. What are the demands of the home on the child?
3. How does the school equip the child to meet these requirements?

The Home and Education Committees are composed of the same membership, with different chairmen and secretaries. These two committees will meet under their respective chairmen alternately to consider the special problems which lie in their related fields.

A general evening meeting of the entire association is held the third Thursday of each month, thus giving better opportunity for the men to be present. A report of the November meeting will be found in the current issue of this journal.

ANNOUNCEMENT FOR JANUARY

The Editors take pleasure in calling the attention of the readers of the *Elementary School Teacher* to an article which will appear in the January number from the pen of Dr. J. H. Badley, headmaster of Bedales School, Petersfield, Hampshire, England. This institution is one of a small but most interesting group of pioneer schools which has representatives in England, France, and Germany. Bedales ranks with the great English public schools, but it has broken away from many of their traditions, and it deserves a place in the front rank with the most modern schools in our own country. This particular school is unique in its class, as it is coeducational. The article will be well illustrated from photographs which show much of the beautiful environment as well as the work of the school.

EDITORIAL NOTES

High-School Conference

The eighteenth educational conference of academies and high schools in relations with the University of Chicago was held at the university on November 11 and 12. Two years ago this conference took up the question of the curriculum of the elementary and secondary schools, and appointed a commission to consider the feasibility of modifying the course of study in some way which would enable the pupils to complete their college work at an earlier age than they do at present. The commission, consisting of twenty-one members, was divided into three committees of seven each, which reported last year upon the elementary, secondary, and college interests respectively. In the main, the reports agreed that there can be, and that there should be, an economizing of time for the pupil; but no recommendations were definitely adopted by the commission as a whole, and the organization was continued another year that further study might be made of the questions involved.

Report This Year

The conference this year listened to some papers which were devoted mainly to reports of what is being done in different places with the six-year high-school course. The tone of the papers was distinctly in favor of extending the secondary course so as to make it cover two years of college work.

The commission made practically no advance upon the work of last year, except to recommend that a commission of fifteen be appointed to continue the investigation, and to propose lines of study indicated by the following questions:

1. Is the present policy of differentiation between the elementary and secondary schools desirable; or should an effort be made toward greater unification in method and organization?

2. Should the elementary school correspond to the period of childhood,

and therefore should it provide for six years of school work from the ages of six to twelve years, instead of eight years as at present?

3. Should the secondary school correspond to the period of youth, and should it therefore provide for six years of school work from the ages of thirteen to eighteen, instead of four years as at present?

4. What revision of the curricula of the elementary and secondary schools, and what changes in methods of teaching, can be made that will contribute to economy of time and efficiency of work?

5. In order to secure a well-balanced development, and at the same time to contribute to the economy of time, can the school year be lengthened advantageously and minor vacations be more equally distributed?

6. Under what limitations should high schools undertake to do the work of the first two college years?

A seventh question was added from the floor in the conference, to the effect that an effort be made to state the periods of growth or development of the pupil in some other terms than years.

Shortening the Curriculum

In regard to the distribution of the pupils' time in school and college, the high-school teachers are distinctly generous. They are generally willing to assume responsibility for either one or two years of the elementary course, or one or two—preferably two—years of college work, or possibly both. With most high-school teachers, too, it is perfectly clear as to how this change should be made. It is only a matter of scissors and paste: simply attach to the lower end of their present curriculum what is cut from the elementary schools, and paste to the upper end what is taken from the colleges, and it is done! Does this shortening really shorten?

From the time when the pupil enters school at six years of age until he takes his doctor's degree, it is, at present, normally eighteen years—eight in elementary, four in high-school, and six in college work. Last year the commission reported favorably upon reducing the elementary period to seven years; they then proposed so to readjust the high-school and college curricula as to save another year, and thus land the youth at twenty-two years of age where he now appears at twenty-four. This year, one of the questions of the commission indicates a tendency to make the reduction wholly in the elementary period.

Not a Question of Scissors and Paste

While everyone feels that there is considerable waste for the pupil as the whole curriculum is now organized, it is clear that the commission has done little of real value in the way of suggesting a practical reform. The chief source of waste is found in the fact that we now have three distinctly organized curricula. These at present are not related to each other in a natural sequence either in matter or method, and it is inevitable that the pupil should lose — that his development should be stayed — when he passes from one to the other. The net result of the commission's work has been to accentuate these divisions and to make them more formal. The suggestions made that any one be either shortened or lengthened are not aimed at the real trouble at all. If carried out, they could result only in an organization as artificial and fortuitous as that which now exists.

Mechanics versus Psychology and Pedagogy

It is to be hoped that the new Commission of Fifteen will transfer the question from the field of mechanics to that of psychology and pedagogy. A few things in this matter are fixed. In the first place, nobody can shorten a "nature-made" period of human development by applying to it a man-made course of study which has been prepared on the principle of calling three quarts a gallon. In the next place, it should be remembered that when development is urged beyond a certain rate it ceases to be development at all. The only possible way to reach the minimum of waste in the educational process is to secure the continued maximum efficiency of the pupil in his work. This is not attained now in either the elementary school, the high school, or the college. It never will be attained by simply sliding, mechanically, up and down the scale, the artificial divisions which exist at this time in the curriculum.

The "All-Around" Teacher versus the Special Teacher

In reorganizing the curriculum, there are two ideas that must be reconciled: one of these relates to the "all-around" teaching which has been supposed to be peculiarly appropriate in the elementary school, and the other to the "special teaching" which is thought to be particularly fitted to the high school. Here is one of the facts: Special teaching has penetrated the elementary school everywhere, and it is bound to permeate as thoroughly this part of the system as it does the high school. Conditions have greatly changed from what they were when the "all-around" teacher flourished. There was but little to be taught then but the "three R's." Nowadays it is a physical, as well as a scholastic, impossibility for any one teacher to meet all of the recognized demands of the pupils in any grade. Manual training from its introduction has demanded the special teacher. The same is generally true of music. It is beyond question that special teachers are needed for domestic science, textiles, clay-modeling, drawing, painting, nature-study, geography, and other subjects in the schools when such studies are placed upon a satisfactory basis. It is not necessary to argue here for the benefits of expert special knowledge on the part of the teacher.

How to Preserve the "All-Around" Idea

Under existing conditions, then, the question is: How can the idea of the "all-around" teacher be combined with that of the special teacher to secure the benefits of both? In the University Elementary School the plan pursued at present is as follows: Each group or grade has a head teacher (in this school called "critic teacher") who is solely responsible, under the principal, for all the work of the children under his or her charge. The special teachers of manual training, the arts, domestic science, and physical culture, regardless of their official position, stand related to the critic teacher, functionally, as his assistants, and each critic teacher organizes his teaching staff according to this idea. In special conferences the work of the grade is discussed and planned with sole regard to what seems to be best for the "all-around" welfare of the pupils. Each special teacher is expected to set forth the particular claims of his subject and to teach his subject; but he is expected to do so with a definite recognition of what the pupil needs in other directions. It is part of his business, therefore, so to work out the relations of his subject as to be of assistance in meeting those needs. Thus the special teacher in manual training, for example, is called upon to show how much demand the proper presentation of his subject makes for number, reading, drawing, writing, and so forth, and he is expected to meet the demand.

This does not mean, in the end, that he teaches his subject less, but that he teaches the children more. Each teacher of a particular subject, therefore, becomes a special teacher possessed with the "all-around" idea, and the effect upon the children is that of having not one, but many "all-around" teachers.

Upon What the Success of the Plan Depends

Of course, the plan succeeds only upon two conditions: first, that the special teacher has the motive to subserve the best interests of the whole child, and that he has pedagogic insight enough to work out the relations of his subject; second, that the special teachers be made finally responsible to the head or critic teacher of the group or grade. Nothing could be more fatal to the plan than to have the special teachers working after their own sweet will without a compact organization under a recognized head that is responsible for the whole. In practice, this plan does not lead to contention, as might be supposed. Each teacher who follows out the relations of his subject, as they approach and merge into something else, is only too glad to avail himself of the experiences of others who approach the pupil from different points of view. The varied knowledge concerning the pupils which is thus brought into a common fund, and the necessarily perpetual readjustment of subject-matter, combine to make harmony and to give an actual strength to the instruction that can never be realized by a single teacher of the old "all-around" type. The "all-around" teacher always has been something of a myth. In the ungraded country schools even, where he is the roundest of the "all-around" kind, he is usually a specialist in something — arithmetic generally, in earlier days — and does all of his teaching from that point of view.

Application of the Plan to the High School

As the elementary school is now beginning to avail itself of the advantages of the special-teacher idea, it is none the less important for the high school to begin to act upon the principle of the "all-around" idea. The chief weakness in high-school work is that each instructor teaches as though his pupils were all to become specialists in his particular branch of knowledge; and, furthermore, as though the proper way to specialize is to buy, beg, or steal all possible in one subject and to exclude and ignore as much as possible everything else. This results in unholy rivalries among the teachers and in disconnected thinking on the part of the pupils. Here is one place where there is real waste in school life, because the laws of symmetrical growth are trampled under foot and the pupil is allowed to drift. If the plan of organization proposed for the elementary school works well through the first eight years, there is no reason why it should not work equally well through the next four, and on through the college.

Pedagogy and Biology

The principle of organization here maintained will apply to any stage of growth. The strong personal interest of the teacher that is maternal in its character in the early years will develop into a personal sympathy no less intense, though resting upon different grounds, in the period of adolescence, and in later years. Any plan which proposes methods for one period of school life that radically differ from those of another period is wrong. For development, throughout, is but a matter of growth, and growth is a biological fact. No scheme can be true in pedagogy which is false in biology. Pedagogy is but the organization of the developmental influences around a child, as horticulture is the organization of similar influences around a plant. The varying attitudes of mind of infancy, childhood, and youth only reveal from different points of view the same growing organism, which, while nourishing itself upon a great variety of things, always feeds in the same way.

The only way, therefore, actually to economize in the educational process is to forsake those methods of reform which tend to emphasize the breaks between elementary and secondary, and between secondary and college, education that already exist. The attention must be turned toward plans for unifying the curriculum from first to last, and to the development of methods that flexibly conform themselves at every stage to the sensitive, yielding, growing child and youth. This will finally remove the breaks that now exist even between any two consecutive years of school life.

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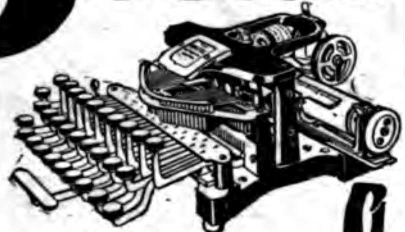

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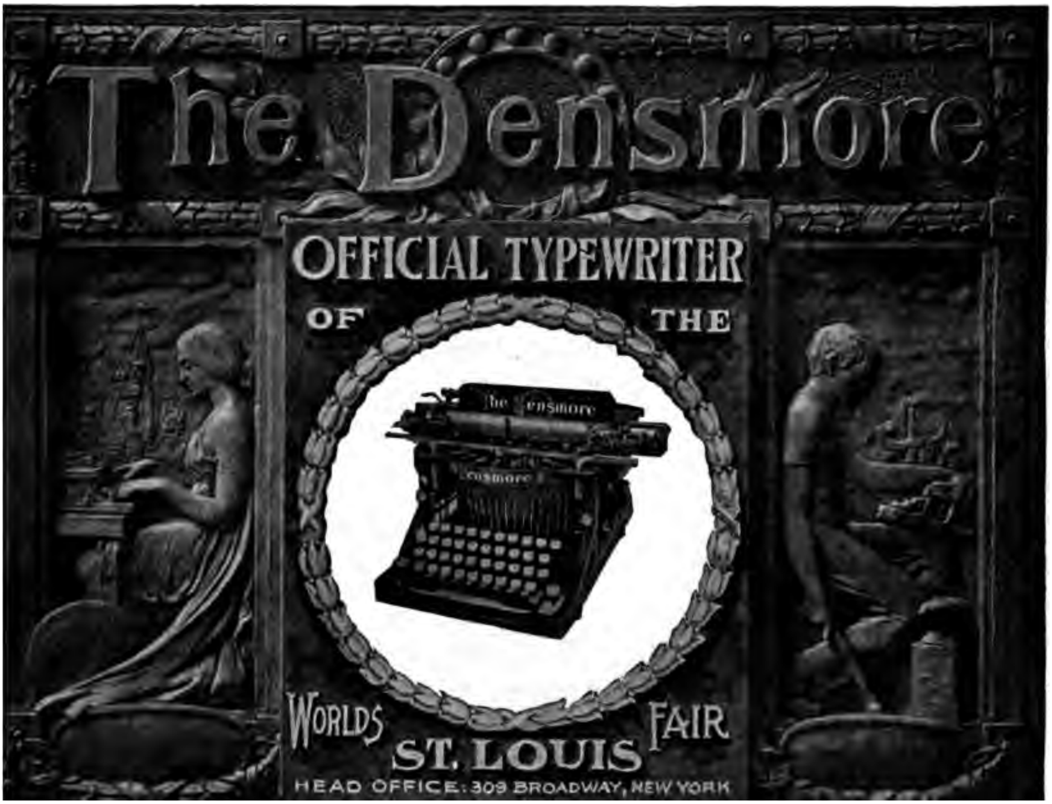

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CONTENTS FOR JANUARY, 1905

BEDALES SCHOOL, PETERSFIELD, ENGLAND - - - - - - J. H. BADLEY 257

A MORNING EXERCISE - - - - - - - - - - - - - PEARL I. BACKUS 267

AN IDEAL COURSE OF STUDY - - - - - - - - - WILLIAM M. GIFFIN 271

BEVERLY HILLS - - - - - - - - - - - - - - ELSABETH PORT 275

THE LIBRARY AS AN EDUCATIONAL FACTOR - - - - M. E. AHERN 278

THE TEACHING OF A LANGUAGE IN THE ELEMENTARY SCHOOL LORLEY A. ASHLEMAN 285

WHAT IS ACCURACY IN ELEMENTARY ARITHMETIC? - - - - G. W. MYERS 292

THE EXTENSION OF THE VACATION-SCHOOL IDEA - MRS. CAROLINE M. HILL 298

IS THE ELEMENTARY-SCHOOL CURRICULUM ADJUSTED? ARTHUR HENRY CHAMBERLAIN 302

THE PARENTS' ASSOCIATION - - - - MRS. FRANK HUGH MONTGOMERY 311

EDITORIAL NOTES - - - - - - WILBUR S. JACKMAN AND MISS BERTHA PAYNE 313

The Distractions of Technique; The Chief Offenders; Technique the Outcome of Thought; Why Failures in Technique; How Train for Technique; Discouragement of the Pupils; Pupil's Right to His Own Technique; What's the Remedy? Educational Experiments; The Function of the Private School; The Outcome for the Community; The Fixity of a System, or the Parable of the Baker; The Application; Possibilities or Impossibilities.

BOOK REVIEWS: - - - - - - - - - - - - - - - - - 320

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VOLUME V NUMBER 5

THE ELEMENTARY SCHOOL TEACHER

JANUARY, 1905

BEDALES SCHOOL, PETERSFIELD, ENGLAND

J. H. BADLEY
Head Master, Bedales School

I am asked to contribute to the pages of the *Elementary School Teacher* a short description of my school as now working at the close of the twelfth year of its existence and the fourth since we moved into our new quarters—planned and built for the purpose—at Petersfield. It is a pleasure to accept this opportunity of speaking to teachers among whom I have found many friends, in a country where education is studied and practiced with such enthusiasm and such readiness to follow out principles to their logical conclusion in practice; and I cannot begin without saying how much I feel we owe to American inspiration and example, even though our problems here are so different that in some respects we may seem to be following different lines. For example, it must not be forgotten that in England class distinctions are so deeply ingrained that, however much we may wish to break down these barriers in education, it is at present practically impossible to do so; and that, just as the so-called public schools represent the educational ideal of one social class, so there are various other grades of schools representing different grades of middle-class education, varying according to the scale of fees and the age at which the majority of the pupils leave the school. In order, therefore, to gain any clear idea of an English school, it is necessary first to know to which of these grades it belongs. And this is not in any way a question of its size or age, but of the class from which it draws its pupils, and the length and purpose of its educational course. From this point of view Bedales may be reckoned along with the English public schools, with this proviso that, in respect both of purpose and of cost, it appeals rather to the professional and business man and manufacturer than to the moneyed, landed, and aristocratic classes that support the greater public schools; and the course of training here given is intended for those who will earn their own living in similar professions—in most cases after a further course at the university or technical college. The school is, therefore, intended for those who will later on be leaders, either in their own private concerns or in a more public capacity, and for those only who will be able to remain at school until seventeen or eighteen, or even longer, before they actually begin the special training of their profession.

In the second place, it must be remembered that such schools in England are usually boarding schools, drawing their pupils, not from the locality in which they are, but from all parts of the country. This fact has set its stamp, whether for good or ill, on English education. There is, no doubt, much to be said against it; but, on the other hand, it need hardly be pointed out that it adds immensely to the opportunities of the educator who realizes that school is a place for the training of habit and of character no less than of mind; and, further, that it is at the present time, in most cases, a necessity, if children are to be brought up in the country rather than the town—a point, the importance of which it seems to me hardly possible to overrate.

We start, then, from these conditions. Bedales is a boarding school, in the open country, numbering some one hundred and fifty boys and girls, most of whom will remain at school till the age of seventeen, eighteen, or even nineteen, and then receive some further course of professional training, and most of whom will in the end have some share in the direction of the lives of others. Of other conditions and vexed questions in English education at the present time I say nothing, because we are here happily free from them, being unhampered by any external authority. The school is free to follow its own aims in its own way. As long as parents continue to send their children here, we have nothing else to consider than the good of the children and the needs of the time. And though we ask for inspection by other educational bodies and by the government, we are in no way under any external or government control. In fact, one may regard Bedales as an educational laboratory for testing principles and their applications in various methods. But this must not be taken to mean that the school has no definite principles and no fixed aim. It represents the attempt to work out in practice a complete and all-sided educational course, subject to the conditions already laid down, of which I need say no more.

But we have stood long enough on the doorstep explaining what the school is. Let us go inside and see what is doing. We enter a quadrangle, partly roofed to serve as a play-ground and drill-ground for bad weather, partly open to the sky so as to admit the outer air freely to classrooms and living-rooms, all of which open on to the cloisters that surround it. If it is an interval between classes, this quadrangle will be alive with noise and movement, and you may have to dodge the flying balls; but now the players are streaming off to the various classrooms, and we will follow them. Some classrooms, you see, have numbers on the doors; these are the "form-rooms" of the junior classes, not only for work, but in free-time as well. Others have names on them; these belong to the teachers of special subjects, to whom the senior classes come at their allotted hours. We will look into one and another as they chance to come. Here are some juniors discovering the center of gravity of cards of various shapes by hanging them up. Here again are some plotting the curve represented by an algebraic equation. Here they are learning how to set to work to translate a Latin book; the master is "preparing" it with them, getting from them their suggestions and discoveries, and keeping them on the track. And is this a game going on in the next room we enter? Yes, a game of "Tell me what I have thought of," but all in French. They have just guessed the object, and now comes a French song before they go. This is the library, and here, when we look in, are several of the older boys and girls at the various tables, preparing work by themselves. And this is the physical laboratory, in which a senior class is at work discovering for themselves the principles of mechanics, with the help of apparatus mostly made in the school workshop. Two things will probably have struck you in all these classes: first, that the rooms are small — for classes number only twelve to fifteen in each — and that all are bright and clean, with pleasant-colored walls and plenty of pictures — for they are not used for class work only — and with beautiful views of the Downs from all the windows. We believe, as you see, in the *unconscious* influence of the child's surroundings, buildings and works of art, and the beauties of nature; and, secondly, that in all the work there is very little teaching in the old sense of "telling," but a great deal of discovering for themselves. Initiative, the power of tackling problems as they arise, we regard as of more value than book-knowledge. Our part, therefore, is not to lecture or to demonstrate at the blackboard, but to start problems and let the children demonstrate to each other and to us.

But you have probably seen enough of such work by now. Let us go back to the quadrangle — noticing on the way the board on which the weather records for the month are entered graphically by certain juniors each morning in rotation — and see the clothes inspection going on; for boys as well as girls have to learn to look after their clothes to some extent, and at least to keep them clean and tidy. Then we will go over to the gymnasium to see the class there at their Swedish drill; and look in at the girls' house on the way at the juniors' sewing class, in which you will not be surprised, I hope, to find boys sewing with the girls; for in the earlier stages at least we want to make no needless distinction, but let the boys share the sewing and cooking, and the girls the wood-work, though later on they will take different lines.

And now the morning classes are over, and when we get back we shall find boys and girls lined up for dinner inspection, while the prefects see that hands are clean and hair brushed. The gong rings, and all file into the hall, where we will follow. They sit, you see, by age, at the different tables, boys and girls together, with a member of the staff at each table in turn for a week. No rule of silence here; and by the time the meal is over you will be

A CLOTHES INSPECTION

TAKING A WEATHER READING

able to judge how far the healthy freedom we aim at is attained. Now they go off to change into their outdoor dress, as they must every afternoon, whether for games or manual work. Today is a "whole-school" day, so presently we shall find them scattered over the whole estate, at different kinds of work. Some are in the studio doing free-arm work on the blackboard, or making brush-work studies of plants to be used afterward for design, or drawing from the cast. Others are in the workshop, making a scale drawing of the joint or object they are then to make in wood. Others again are in the forge, for some new fencing, perhaps, has to be made for the poultry run. Some are at work in the school garden or orchard; others over at the farm doing the dairy work in their turn. Some are down shooting on the rifle range; some are surveying a part of the playing-fields where leveling is needed. The games captain you may find driving the horse roller to get the ground ready for the match tomorrow, while others are busy putting up a new wire fence to keep the cattle off it. Some are building a store-shed, or finishing off the roof of the dressing-shed around the new open-air swimming-bath. And this is the afternoon when the older girls are having their cooking lesson, preparing the evening meal for the staff.[1]

And now it is tea time, and all are changed back into their house clothes. The hall looks emptier, for the staff is away enjoying, let us hope, the meal you saw being cooked, and the prefects sit around at the tables in their place. After tea there is an hour's class — this is the time given each day throughout the school to history and literature; then singing, in which all take part together in the hall — just now they are taking Stanford's "Revenge" — followed by half an hour's quiet reading; and then they separate for various occupations. Some of the older will put in another hour's work; but most will be doing bookbinding or carving, or some other chosen handicraft; or it may be the evening when the various school societies meet, and you can listen to their papers or debates, or look on at the fencing, or find the hall cleared for dancing; or, if it chances to be one of the monthly "merry evenings," we shall all meet there for recitations, songs, readings, or perhaps a home-made play. But by half-past eight the boys in charge have arranged the hall for prayers; we all join in a brief service, there is a handshaking all around, and the day is over. The girls go back to their own house, the boys go up to their dormitories; and you may like to come into my study for a little and question me as to the meaning of all you have seen.

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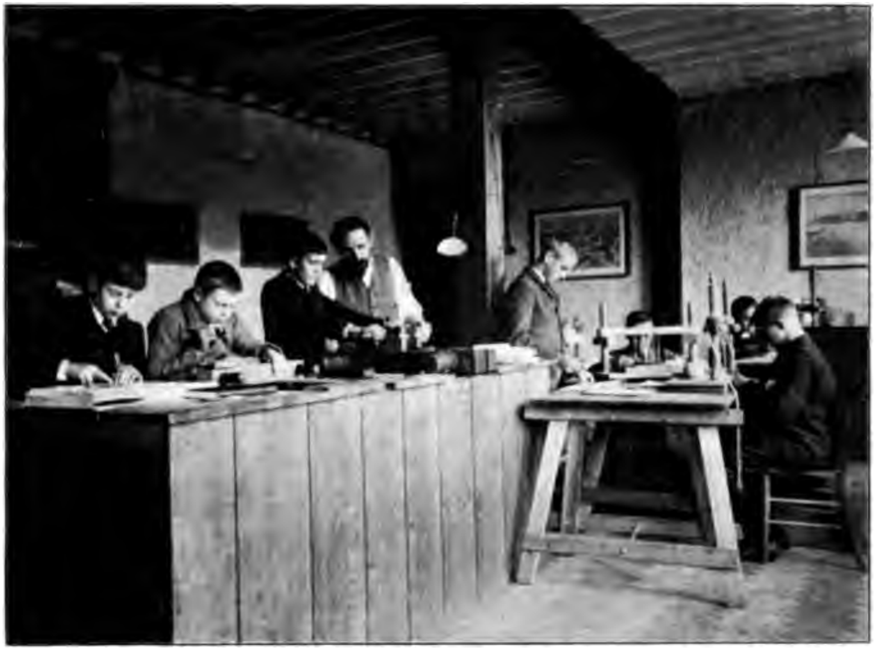
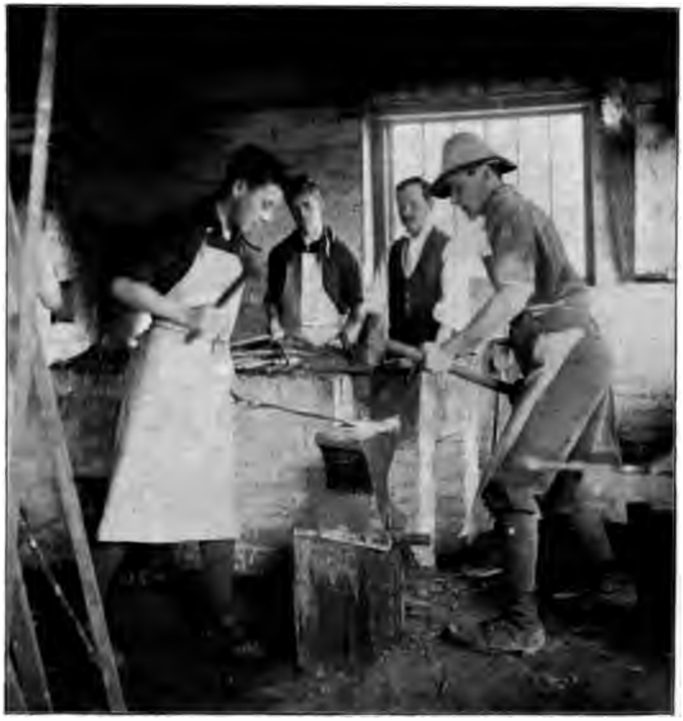
[1] It must not, of course, be supposed that everything here mentioned can be seen going on *at the same time* on any one day. I have brought together, to form a "specimen day," various things that I happen to have seen at one time or another during the past week.

It means, as I said just now, an attempt to give a complete and all-sided education, in which equal importance shall be given to the training of body, mind, and character. A few words, then, as to the plan on which we work with regard to each of these.

The training of the body is not only a matter of physical drill, nor even of those outdoor games and sports that play so large a part—too large a part, perhaps—in our modern schemes of education. These have their place, especially if they are not confined to two or three games like cricket and football, hockey and tennis, however good; but include also swimming, and such sports as boxing, fencing, etc., which furnish so admirable a training for other qualities besides the skill of hand and eye they require. But all these things may be overdone, until play becomes enthroned in the mind as a more desirable object in life than work, and even leads to contempt for other forms of manual skill. For this reason, no less than for the healthy training both of body and mind, there must be a large amount of time that would otherwise be spent in games given to various forms of manual training, whether in wood or metal workshop, in garden or on farm. To such work we assign at least two afternoons each week, and do not let games monopolize all the time set apart for outdoor exercise. But apart from such definite physical training, even more importance we believe attaches to all the everyday matters of hygiene, such as food, clothing, short and varied hours of work, and work in the open air, fresh air indoors no less than out, the freedom of life in the country—in a word, the practical teaching of hygiene in the habits of life no less than in the classroom. With this object the buildings are planned and the time-table arranged—with considerable difference, I need



FREE-TIME OCCUPATION — BOOKBINDING



IN THE SMITHY

hardly say, between the length of working hours for younger and older, as well as between the kind of work done at different stages of development.

To this we may now turn. The fact that we are not bound by any external scheme leaves us free not only to employ in the classroom whatever methods we may think best, and to carry on experiments in teaching, but also to make the attempt to plan a complete course unaffected -- at least until the final stage — by external requirements of public examinations. In this way we can refuse to allow what seems to us premature specialization in any direction; and though for most the external examination must come in the end, we do not allow it to affect our work until all have been through the general course that we think necessary for the training of the various activities of a human being, as distinct from the special requirements of the later career. Up to the age of sixteen, therefore, or fifteen at the earliest — for development is not always directly according to age — all follow the same general course, from the kindergarten on; but after this point is reached, we leave it to personal bent, which by then should have discovered itself, and the choice of the career, to decide the special lines of work to be followed in preparation for the coming special training, technical or professional, whatever it may be. It will not be possible to do more than give an outline of the work done during these two stages. The earlier or general course, in which there is little or no option, comprises the following subjects:

1. Language: the mother-tongue, one modern language, and — from the age of twelve — a four-year course of Latin.

2. What may be called the humanities *par excellence:* history, first of our own country, then of classical times; literature linked with and, as far as possible, corresponding to the history; and geography.

3. Science, beginning with nature-study in the garden and fields, and the science of every-day life, connected again with the classes in cooking and hygiene, and so leading to the more systematic study of physics and chemistry.

4. Mathematics, taught not merely for commercial utility, but rather as a training subject, and based largely on practical measurement.

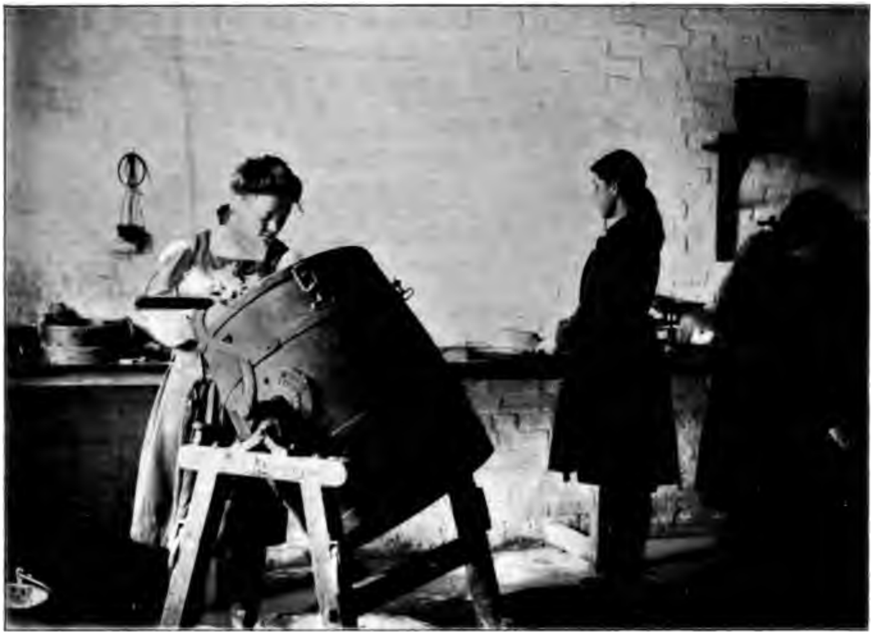
5. Manual work, including, for all, various branches of art work, a course of wood-work and of gardening, and, at one stage or another, such things as cooking, sewing, dairy work, the care of poultry and bees, etc.

6. And, lastly, music, in the form of classes in sight-reading, etc., and daily singing for all.

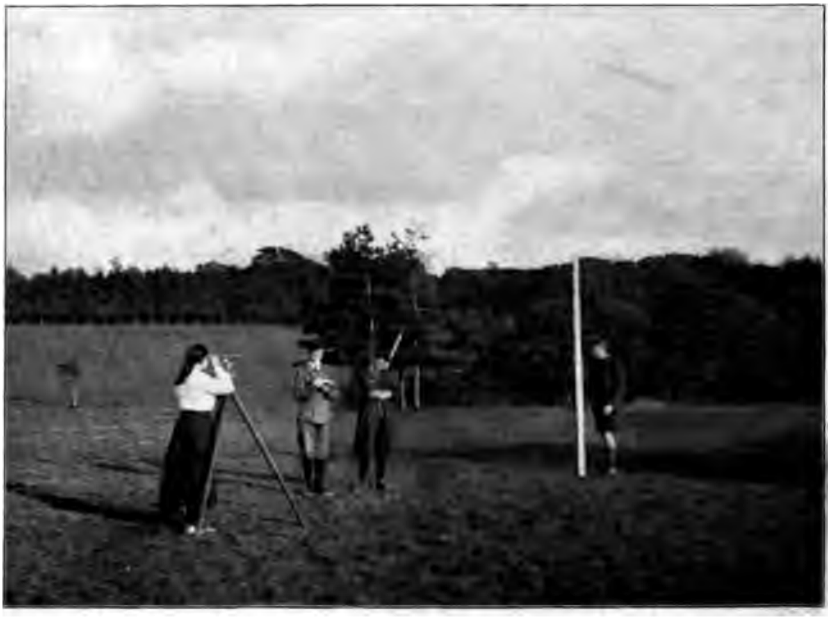
I am tempted to stop here and fill in this outline, for there is much that might be said, both as to the reasons for including so wide a range of subjects, and the proportional time given to each, in order to escape the many-headed Scylla of unwise dissipation of energy in obtaining a smattering of many things, without falling into the Charybdis of over-pressure and an overcrowded time-table. But to do this would require a treatise, and I must pass on.

So much, then, for the general course. After the age of fifteen or sixteen, as said above, the special lines of work are largely optional and examination requirements are considered. Thus, for instance, the main course followed may be classical, with Greek in place of science; or modern, with Latin giving place to German; or special lines in science may be followed—metal-work, for example—and mechanical drawing being taken as preparatory for the technical training of the engineer; or more time may be given to practical work in workshop or on farm, or in domestic economy or art; and due preparation made in each case for matriculation and other examinations necessary for entering on the further stage when school is left. But whatever the special lines followed, in all cases some common work is still done, especially in modern history and literature—the necessary elements, as we think, to broaden and harmonize all branches of training.

Before leaving the subject of mental training, a few words must be added on two points. It has just been said that we take no kind of external examinations until the final stage is reached. But examinations have their use for the pupil, and, still more, for the teacher, if they are true tests, well applied. Each year, therefore, we ask some university or some educationalist of note to inspect the work of the school and to conduct an examination in



IN THE DAIRY



TAKING CONTOUR LEVEL

CLASS IN COOKING

LAYING OUT A NEW GARDEN

concert with ourselves. By this means we insure that the children are tested in work they have actually done; and, while we do not have to conform our course to any other standard, at the same time we get an impartial judgment upon the work done and its results. The other point is one that specially concerns the boarding school — the provision of occupation for leisure time and the encouragement of hobbies that may become the pursuits of a lifetime. With us, times are set apart, especially in the evening, for reading and music, for handicrafts of various kinds, for dancing and lectures and debates, and for the meeting of societies classical, scientific, etc.; and the summer half-holidays in particular for expeditions in pursuit of interests in natural history, archæology, and so forth, for which we are here particularly well placed, in a country studded with relics of the Roman occupation, and within easy reach on one side of Saxon Alfred's capital, and on another of the home of Gilbert White. But however much I should like to emphasize the value of such interests, the by-products of a real education, here again I must not linger, for I have yet to say something about the means of character-training.

All educators are agreed that this is not so much a matter of precept as of habit; it depends on the child's environment, on the daily routine of his life, the rules that he has to obey — let me say in passing that they must be as simple as possible, and the main reasons for the keeping of them made plain to all — and still more, I think, on the opportunities given for self-government, and the constant claim that he shall not only obey rules, but act upon his own responsibility. Of one part of this environment, as I have called it, of the daily life at Bedales I need say little to American teachers, to whom coeducation is a familiar fact. Here we are only carrying it a step farther in making it one of the factors in the life of a boarding school — where, as I venture to think, the good results are even more certain, owing to the still closer and more constant intercourse, and the difficulties much less than is commonly supposed. Not that there are none. But, if, as we believe in this country, the life of the boarding school, with its freedom of self-government on the one side, and on the other its countless opportunities for bringing influence to bear on the individual, affords a fine training-ground for character, it is all the more so when boy and girl have to work out their problems together, and when among the influences at work are ideals and traditions that broaden the outlook and touch the conduct of either sex.

A word too about religion, as taught at Bedales. Of the teaching of forms and creeds there is nothing, nor is any comer rejected on religious grounds. In questions of private belief and forms of worship each is free to do as he has been taught at home; only he must learn the practical lesson of toleration of those who think and worship differently. In our own religious gatherings we neither wish to teach one creed nor to undermine belief in another; but to show that, whatever the outward differences, there is something beneath each that is common to all, and that this, as shown in the daily life, is the main thing that concerns us all alike. And especially we try to bring all to see and grasp, according to their ability, the opportunities of social service of which school life is so full, and which, to my thinking, are the best of all that a school has to offer. But this side of our work it is not easy — least of all for one engaged in it — to describe; any more than it is easy to gauge its results, for the greater part lie beyond the school. Our hope is that the life lived here will not end when the school days end; and that foremost among the lessons here learned and carried away will be that summed up in our school motto: "Work of each for weal of all."

I feel that the above brief outline can give but a confused impression of what we are trying to do at Bedales. Let me, however, add that if any into whose hands this may fall wish to make closer acquaintance with the school, I hope that if ever they are in this country, they will find their way to Petersfield. They may be sure they will be welcome. Few things have given us more pleasure in our work here than the interest taken in it by others, and the links it has established for us with fellow-workers in other lands, and especially in the one where education is most believed in, and therefore is most living.

A MORNING EXERCISE

THIRD GRADE — FRANCIS W. PARKER SCHOOL

PEARL I. BACKUS
Third-Grade Teacher

The following reports were given by the children of the third grade at morning exercises. They are the outgrowth of a year's work in the study of the history of Chicago, and illustrate one phase of the development of transportation.

Last year the third grade studied about early Chicago, and the different ways of traveling in the early days. We decided to make a train of cars in the sloyd shop. We chose the cars because they are made just outside of the city, and because Chicago is such a very large railroad center, and because going by train is the most rapid way of traveling.

The reason we did not make a passenger train, is because there is so much shipping and commerce going on in the city, and the passenger cars are too hard to make.

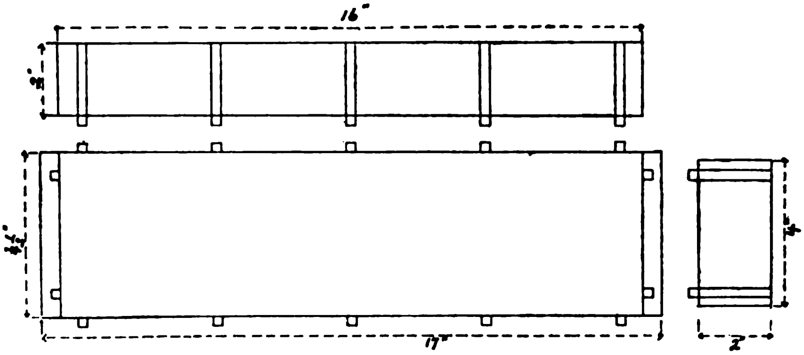
We also made plans for the truck, the wheels, and the track. We thought it would be nice to give the cars to the kindergarten children.

JOSEPHINE PALMER.

We did not go to the carshops to measure the cars, as we had all seen freight cars, and we had a good book[1] with pictures and measurements given.

Each child used the book and selected the car he liked the best. I chose the coal car. It was 34 feet long. We decided upon the scale to use in making the cars. We first thought we would make them 1 inch to 1 foot, but 34 inches would make them too long. Then we thought that ½ inch to 1 foot would be better.

This is the plan of my car. HELEN STAUFFER.



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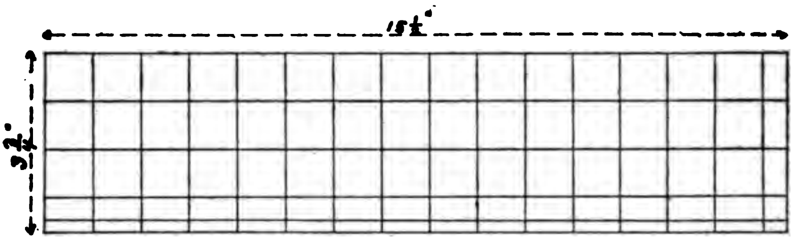
[1] American Car and Foundry Co.'s publication.

Two people worked on a car. If each child made one car, there would be too many cars, and we would not get them finished. One worked at the sides and floor; the other one made the ends, the top, and the running-board. We put two coats of paint on them. One child put on one coat of paint, and the other put on the last coat. We grooved the sides and ends with a carving tool to make it look like boards running up and down. We used large staple tacks for the steps. We named each car and planned the lettering. We called the cars the " F.W.P. Fast Freight."

Mildred Zenos.

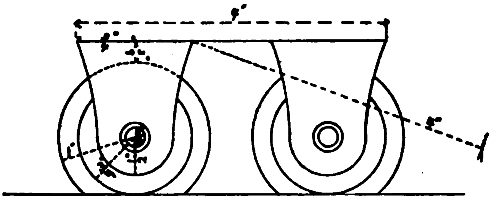
We wanted to know the capacity of our cars. We used inside measurements. The box car is 18½ inches long, 4 inches wide, and 3 inches high. I made a drawing of the floor of the car. We used 1-inch cubes to see how many cubic inches there were in one layer. We found 74 cubic inches. In three layers there were 222 cubic inches.



I made a drawing of the floor of the coal car too. In the first layer there were 58⅛ cubic inches. In two layers there were 116¼ cubic inches.

Frieda Maynard.

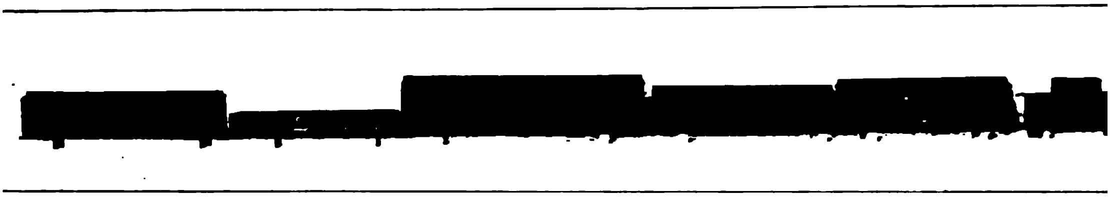
When we made the wheels we used the same scale that we did in making the cars, only we made the flange bigger. The reason we did this is because the little cars are not heavy enough to stay on the track.

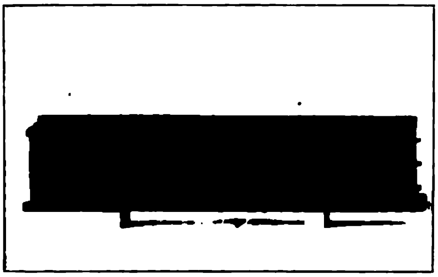


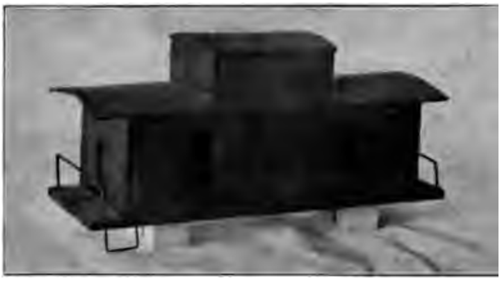
I made a model of the wheels on the lathe. Here is the plan of my wheels.

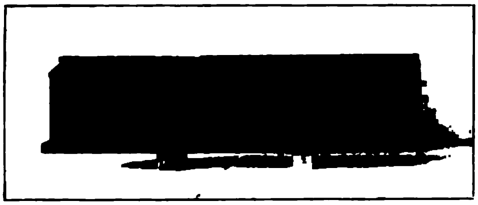
Frank Packard.

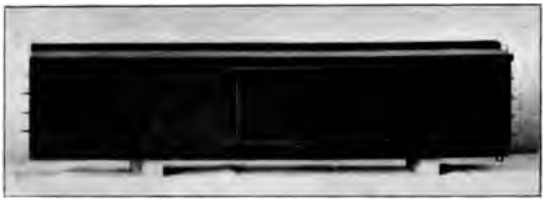
How we made our wheels: We wanted to have iron wheels for our cars, but we could not make them. We used Frank's wooden model for casting wheels in lead because we wanted to know how they cast large wheels. We

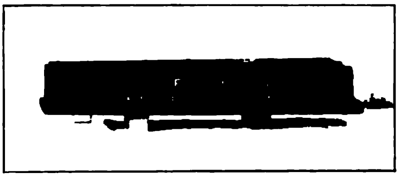


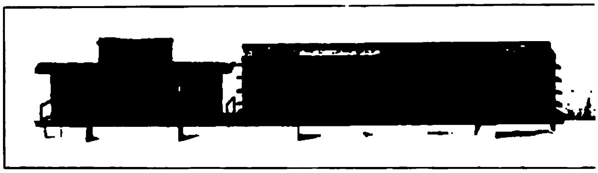


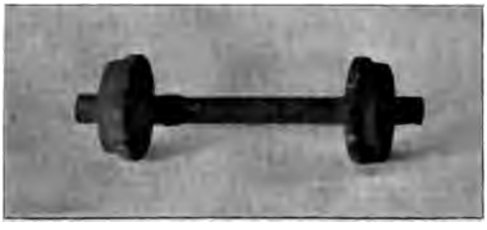








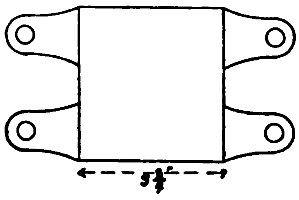


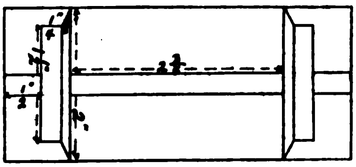


took two flasks and pounded molder's sand into one of the flasks, and set the wooden wheels half way in. Then we sprinkled dry sand on so that the molder's sand in the other flask wouldn't stick. Then we put the other flask on it and the pegs held it in place. We then took the two flasks apart and took the wooden model out. We made air holes in the flask on top with a hatpin and a larger hole to pour the melted lead in. We put the flasks together again and poured the lead in the hole. When cool we took the flasks apart and this is the way the lead wheels looked. The reason there are these holes in them is because there were not enough air holes in the flasks and the melted lead couldn't push the air out.

Dorothy Wing.

Everybody in the third grade last year made a drawing for the truck for our cars, and we at last decided upon this one. The truck is made of some metal. It fits on the bottom of the car and holds the wheels onto the car. We are going to screw our truck to the car so it can turn a little when going around curves. We did not plan to keep the side of the truck from hitting the wheels, and if it did the car could not move very easily, so we think we will put a washer between the truck and the wheels. The wheels are ⅜ inch below the bottom of the car. We made them that way so the wheels will not hit the bottom of the car. We shall make the hole that we shall put the axle in larger than the axle, so it will have plenty of room to turn around.





Lucy Smith.

If we were to use these cars we would send the stock car west to the cattle ranches to be filled with cattle and bring it back to the Stock Yards to unload. The refrigerator cars we would send to the Stock Yards, fill with fresh meat, and ship to the East where the people need it most. The coal car we could send right down in Illinois and fill with coal to help carry on the great manufacturing in the city. The furniture car we could fill with furniture made here and ship west where the people need it most. The box car we could take to Minnesota to fill with grain, or it might be used for any common freight. The caboose is used for the people who work on the train, and the men who look after the stock.

Owen White.

We went down to measure the kindergarten circle, and found it was 16 inches in diameter. We found there was room just outside of the circle for the track. It is to be made in sections so it can be stored away when not in use.

As we have done all we can on the cars, we have asked the big boys to help finish them, so the kindergarten children can use them very soon.

There were many problems in arithmetic not suggested in the children's reports, such as finding the capacity of real cars, and finding the number of board feet and the cost of the lumber used in making the cars.

AN IDEAL COURSE OF STUDY[1]

WILLIAM M. GIFFIN
Principal of the Frances Willard School, Chicago

An ideal course of study should be to the teacher what a menu card is to the hotel guest — that is, full of dainty and valuable suggestions — the one for the inner man, the other for the child-mind. The course of study, like the menu, should be prepared by experts from each department of the teaching force, rather than by mind-stuffers whose whole idea of education is to get over a certain amount of ground in a given time, con so many facts from a given page, and learn to read and spell so many words in a prescribed order. It should be prepared by those who can realize that one has hardly done his duty who has taught a child *how* to read, if at the same time he has not taught him *what* to read; or who can realize that, while a tadpole may appeal to one child in a given grade, another child in the same grade with quite a different environment may have a greater interest in cobble stones, or that a child with a certain environment should have instilled in him a love for birds, while another, who seldom sees a bird, is in much more need of having created within him a love for fresh air or soap and water; that is, one requires training from the humane side, while the other requires training from the hygienic side. How absurd for the hotel guest to think that, because the card is given him, he must begin at the top and fill all its conditions to the end!

We once heard of an honest old farmer who so felt, and who, when he had reached the first third of the card, called the head waiter and said: "Say, waiter, if it ain't agin the rules, I should like to skip from tha' to tha'." No doubt many a teacher has felt ofttimes, when inflicted with a class of left-overs who had at last reached her grade, that she would "like to skip from tha' to tha'," and who would no doubt turn out much better citizens if she could but have the privilege of using her judgment in doing so. Nor can there be any doubt that there are many times when, if she did make a skip here and there, after due consultation with her principal, no one would receive any great injury either mentally or physically.

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[1] A paper read before the joint meeting of the Ella F. Young and George Howland Clubs, October 14, 1904.

I have not forgotten that we were making conditions for this great, big, overgrown village, with its smoke and soot, its dust and mud, its fine boulevards and parks, and, finally, its population made up of people from every country of the globe who, many of them, change their residence every six months. On the other hand, I have not forgotten that we, when writing this course of study, did what every progressive man or woman has done who has had success in life—namely, worked toward an ideal. How can we best do this? Is it not possible to have printed in our course of study parallel columns which may be known as "must" and "may," or "necessary" and "optional," or, perhaps better yet, "minimum" and "maximum" requirements. For example, a child has no right to be in the fourth-year grade and not know that 6 4's are 24. In other words, by the end of the four years in school a child should know, before being advanced to a higher grade, his tables of addition, subtraction, multiplication, division, and partition; and when he comes to us from any part of the city, that is one of the things we have a right to insist upon his knowing before admitting him to the grade mentioned. On the other hand, he may never have seen anything in nature that has appealed to him, not even this grand lake of which we are so justly proud; while, should it be his good fortune to find himself in a school where he can see it each day, he will not be long in "catching on to" its beauties, and the lessons its waters and shores are teaching him. If he has come from some central building where they have not forgotten the importance of teaching him the hygienic side—that is, the use of soap and water—he will there have learned one valuable lesson, which will help him to meet his new environment; and that is one important point to keep in view in making a course of study for a city with such mixed conditions. But few, if any, of the children move from any such district as, say, Hyde Park to a district near the center of the city, while there are many who from time to time move from the center to the suburbs. The work, then, of the central school should tend toward the possible change for better conditions which should or may meet these children. Teaching them the use of a fork and napkin, and of the words "excuse" and "pardon" and "if you please," is of much greater importance than the spelling of rhinoceros, Hoangho, or Yanktsekiang.

Again, there are schools where it is much more important for the pupils to gain the meaning of the Declaration of Independence than to learn the names of the battles of the Civil War or the divisions of the central European continent. A million dollars' worth of powder is burned up each year by people who do not know why they are burning it. I or my children did not have to be told why this powder is burned on the Fourth of July, nor did you in school. It is well, however, to give a few hints to the son of Salbanio, down in the river district, in order that he may have, not only more fun in burning his powder, but a better appreciation of what freedom and independence mean.

Here, then, is one of the many subjects that Miss A., in the central ward or district, should be glad to teach, while Miss B., in a suburban district, whose children have the proper home influence, knows there is no more reason why she should teach it than she should teach her children the use of the napkin at the table; for, as Dod Weaver would say: "They always knowed it." Let us remember, with Parker, that

> Knowledge is boundless, and your pupils can get but a drop of the ocean. What knowledge shall you present them in the years you have them under your care and guidance? What knowledge shall govern you in the selection? The answers are not far to seek. Your selection can be entirely governed by what each individual pupil needs for his personal development. He needs that knowledge which will enable him best to serve the school and the world. The two answers are one; the needs of the school and the needs of the world are the needs of the individual. A course of study is a means to an end. From this course of study the teacher selects the material immediately necessary for the advancement of personal, mental, and moral power.

As said before, let this course of study, then, be a suggestive one, prepared by experts from all departments of the corps of instruction, so written as to enable the progressive teacher to choose that which shall best suit the particular class of children with which the teacher is dealing, that she may feel an individual responsibility in the selection of at least part of the work which she is to give them. This, of course, will be chosen from what we have termed the maximum requirements. To let the teacher have this privilege will best suit the children and the state, and will cause the teacher to feel that she is something more than an automaton, to be wound up and run down at the will of a committee which has made, set, and formed work for her to perform.

As to the program, I say: Hands off! In heaven's name, let me have a little individuality, and let me run my school as my conscience tells me I should! Then hold me responsible when I send you a child named for a certain grade, if you find him not up to the "must" or minimum standard, unless with his card I send you good reasons for his having been advanced to that grade, though not up to the minimum in all its requirements. I have heard of the schools of a certain city in France which were so well graded as to the course of study and arrangement of the program that the superintendent of schools could take out his watch, during any hour of the day, and tell just what page and what verse each child of the city at that moment was reading. Rather than to so much as *lean* in this direction, let us swing the pendulum to the other extreme, and have a go-as-you-please condition; and I vouch for it that the children will be better prepared to enter upon the duties of citizenship, when they have left the school to begin life's responsibilities, than they possibly can if educated under the former conditions.

BEVERLY HILLS

READING LESSON DERIVED FROM AN EXCURSION BY THE SECOND GRADE OF THE UNIVERSITY ELEMENTARY SCHOOL

ELSABETH PORT
Teacher

On Thursday, November 3, we went to Beverly Hills. At ten minutes of 9 we crossed the Midway and went on the street cars to Englewood. We had to wait until a quarter of 10 for the train. We were on the train about 15 minutes.

On the train Denison saw men making a new park.

Geraldine saw seven cows.

Elizabeth saw some pigeons walking around a pigeon-house.

Dent saw a flock of birds flying south.

Lanning saw a wagon of corn.

Denison saw some corn that had not been cut down.

Beatrice Lovett saw corn fields where the corn was stacked like tents.

Meredith and Miss Port saw a field of cabbages.

Lanning saw a man plowing.

Paul saw many pumpkins in a store.

Mary saw some ducks.

When we got off the train the air was clear and fresh and breezy. It seemed like the country. We walked and ran and screamed. We saw a pond of water and a burro. We wanted to find snakes and frogs in the pond. But we had to go on.

Miss Port said that it was too far to go to the farm. We were disappointed, but we had just as good a time in the woods.

The woods were beautiful and quiet, and there was not a house near by. There were oak trees, and the leaves were brown and yellow. We found some red leaves. The oak leaves rustled in the trees. Many came floating and whirling down. Some fluttered down. The ground was covered with dry, brown leaves.

We had a leaf fight. Then we covered Mrs. Thomsen with leaves. We said, "Where is Mrs. Thomsen?" and up she jumped. Then we covered Miss Port. Some children climbed trees and shook the leaves down.

After a while we took a walk. We found another pond. We think it was an old mill dam. We ran down the old logs. We played a long time. Then we wanted a drink. Six of us went to a farm for water. Before we got any water the woman told us to be careful in the pasture. We said, "Why?" She said that there was a wild bull in the pasture. We ran for the woods again.

We ate our lunch in the woods. We wanted water all the time. Next time we are going to take bottles of water with us. While we were eating our lunch some bees came to see us. One bee stung Gordon on the finger.

After lunch we played games and told stories. We saw a man with a gun. We told him about the wild bull, and he said he would have to shoot him. But we think he was just fooling.

At 2 o'clock we started for home. We had a good time.

SIGNS OF FALL

October 11. The leaves are falling.
October 12. The elms are nearly bare.
October 13. The elm leaves are yellow.
October 14. Burrs are turning brown.
October 17. Willow leaves are yellow.
October 18. Some grass is brown.
October 19. The poplar leaves are dry and brown.
October 20. Oak leaves are turning red or brown.
October 21. The weeds are all yellow or brown.
October 24. Most of the birds have gone away.

NOTES ON THE LESSON

This reading lesson for the second grade was written after one of the children's excursions. They had had an almost perfect day and were more than glad to "make a story about it." They were told that the story was to be printed, and that they could learn to read it from the printed slips. They were full of plans for "surprising mother" or reading it in the morning exercise time.

Each of the two groups made its own version. The sentences were dictated to the teacher and written on the board. Much discussion arose as to the best words to use. For instance, when, in describing the air, they decided on "fresh and clear," one little girl said: "And won't you please say 'breezy,' because I just love the way that sounds — *breezy!*" They labored long over the way the leaves fell, some insisting that they fluttered, while others were as sure that they floated, down. We finally had to put in both ways to satisfy everyone.

When the stories were finally all written on the board, they were copied and read next day to the two groups together. They then decided for themselves which parts of each to use and which were unnecessary.

Since the children have had the printed slips, they have been trying to read them. It is rather hard work, as there is not a great deal of repetition, and some of the words are somewhat long to study phonetically. Many have to be told them repeatedly. However, they remember pretty well what they dictated, and their great interest in taking the slips home, when they can read them, holds them to the work.

The verses were made for the Thanksgiving exercise. The second grade was to have autumn pictures for their part of the program, and made these original ones to add to their others:

We went to Beverly Hills
And saw the red leaves fall;
We covered each other with leaves,
And climbed the trees so tall.

The air was fresh and cool.
There was no house near by.
There were so many trees
We scarcely saw the sky.

The "Signs of Fall" are simply the printed form of the calendar kept by the children during October. Each day some child told us one thing that showed the time of year. At first they had difficulty in keeping to the things peculiar to autumn and wanted to write such sentences as, "It is a cool day," or "The sky is cloudy." In a short time, however, they were able to criticise each other's observations and choose the proper ones for their purpose.

THE LIBRARY AS AN EDUCATIONAL FACTOR[1]

M. E. AHERN
Chicago

I deem it a high honor, little deserved, to be given a place on this program. I say "little deserved" advisedly, for I am, I may confide to you, taking the place at the last moment of a more worthy representative; and in addition I feel regret that, though I was a teacher for many years and planned and attended many teachers' meetings, in all that time I never spoke, nor heard any other teacher speak, of the place of the library in the scheme of education. In the files of my educational journals gathered in my teaching years I found no plan proposed, nor approval of any plan proposed, by another to bring to the help of the work in hand the mighty forces for aid that lie in every collection of good books. We did not know, and we did not know that we did not know, that libraries are potent factors in education. But today teachers are awakening to that fact, and all around us we see evidences of a new effort and a realization of Dr. Thurber's words:

> It is now pedagogic high treason, indeed, to act as if textbooks contained the whole canon of knowledge, and for the teacher to explain everything in advance, and then to expect of the class only to say back what has just been said to them, is to reduce teaching to the lowest depths of imbecility.

One of the chief watchwords today is *correlation,* which is generally understood to mean the adjusting of studies in such a manner that one may help out the other. One of the prominent ideas in educational effort today also is that the responsibility for the training of the future citizen, man or woman, does not rest on the school alone. It is only one of a number that have to do with that problem. Among the influences which aid the development of the child's character are his associates, his home, the church, books, and the school. Is it not an important problem that each shall do its own part and do it well? To do this it is necessary to know the full scope of the responsibility — to understand the aids and hindrances, the aims and objects, of the individual influences. To correlate these influences, as far as possible, that one may help out the other in making the child's life a unit, is a considerably higher problem, to my mind, than to determine whether history should precede geography, or geography history, or whether they may not be taught better together than separately. It may seem that the problem is a hard one, but how or where better can it be approached than in a conference of any or all of those concerned in it, or in any part of it? To aid the child in choosing his associates is largely, if not entirely, outside the power of the school; the home and the church are jealous of their rights; but books and their choice belong to the child's mental life, and not only may, but of necessity must, be looked after intelligently by the power that has the general supervision of his mental growth; and this leads to the consideration of the library and its place in any scheme of education.

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[1] Paper read at the Departmental Conferences, Emmons Blaine Hall, School of Education, Saturday, May 14, 1904.

In considering the library as a factor in education, we look at it here in a threefold view: the library in the school as a necessary piece of its equipment, its place in the normal school, and the public library for all, in school and out.

1. First, as to the school library. This, in its make-up, should be not alone a collection of books, but in every sense a selection of books. Every volume in it should be chosen with a distinct and definite purpose in view. Two classes of use will be provided for — collateral and supplementary reading. The first may be used to further the acquisition of useful knowledge; the latter, to cultivate the habit of reading; to cultivate a taste for that literature which will enrich, refine, and beautify life. It will be made up of what may be called here books of knowledge and books of power. There shall be in this library textbooks — the best of their kind, well written by those who are competent to speak, well illustrated by one or several hands whose artistic skill is undisputed, continually revised, and kept abreast of the advance of knowledge. Further, there shall be reference books, books of facts, handbooks, dictionaries, cyclopedias, and the like. The

school library will have place for pictures, for maps, for lantern slides, for various kinds of illustrative material, with well-directed references where in other libraries and museums these may be supplemented and followed up. This material, too, will need to be selected, not merely collected. As the various subjects are presented, there will be different versions of the same material, expanded, illuminated, related. The child will thus be taught to look into the various authorities at hand, and to know where or when to look further, to think and to weigh for himself; he will be given an incentive to read seriously and with a purpose, and he will from the first learn to turn to books as a delight, not as a task. All this for the collateral reading.

In the supplementary reading will be books of travel, of biography, of discovery, of invention, of description of men and places, of people and powers; books of comparison and measure. When the child is familiar with all these, he will read between the lines of his textbook of a hundred interesting things of which the author has not written one word. The use of these books and material will enrich and enlarge the school course with the glow of romance and the warm touch of life. The choice and use of books by children up to fourteen years of age, when the faculties of reason and analysis are supposed to begin to assert themselves, should come under the province of the school, either directly or in co-operation with the special department for children in the public library. To it the pupil should be accountable for what he reads and how he reads it. From it he should get the advice, the inspiration, the foundation of taste, which will make him a wise and careful reader and prepare him for the freedom of the public library. Under right conditions, he will have developed a knowledge of the simpler tools—indexes, catalogues, etc.—and will have absorbed such a general knowledge of the use of books that the awakened powers of analysis will find ready a fund of book-knowledge that will feed them till they grow self-sustaining. He will know where to find the books he needs for pleasure or profit, and will have become acquainted with the sources of book-distribution provided in the community.

Beyond and more important than the assistance which reading gives to the work of the school is the formation here of the reading habit. If the child leaves school acquainted with a number of good books and a love for good books, he has a precious possession worth more to him than any study in the curriculum; something that will not only help him in his daily work, but will throw a safeguard about his leisure. The province of the school is to teach a variety of definite things, but its aim, its end, is the development of character. It has been urged that the public school should fit its pupils to earn a living. This demand ignores real education. The aim should be character, not livelihood. It should fit its pupils to live a life, not merely earn a living. A well-lived life always earns a living. The school should teach handicraft to develop the intelligent and moral use of the hand; teach science to place the truth in its proper relation; teach history and geography, not to make commercial travelers, but all these things to enable the pupil to look out over the whole world and see it crowned with life and beauty.

2. And this brings us to the library in the normal school, which may almost be termed, in all truth, the root of the whole matter. It will readily be seen that, to carry out the plans and purposes of the school library to which we have referred, the public-school teacher must understand its plan and appreciate its value. The normal-school library will contain all that the school library should contain, and more. It contains the books that have been written about education, the statistics necessary to comparison, the bibliographies of a multitude of subjects, the reports of the government of the various educational organizations of the leading educational institutions, and all such material as is needed to illustrate the work of the various departments, much of which may seem at first thought to be outside of the scope of a library. In addition, it will have such close relation with museums, and other sources of like character, that it has easy access to what is not expedient to have at hand. No normal school is fully equipped that does not contain a model children's library, chosen and classified with the greatest thought and care, and with which the students must become intelligently familiar before they can in any true sense be authorized to teach.

To normal schools more than to any other agency belongs the duty of teaching the power of the book to those who are going out to teach. The teacher is expected to know how to judge of textbooks, their value and the part they play at certain periods of progress, as well as their place in the study of the subjects they contain. Of equal importance, though unfortunately not so often emphasized, is the knowledge of certain books and their place in the development of character. Horace Mann said: "If a boy read of the friendship of Damon and Pythias, the integrity of Aristides, the perseverance of Franklin, the purity of Washington, he will think differently all the remaining days of his life." That he may be able to make good use of such books as these and others, a teacher should have read and made a part of himself, have read and enjoyed before becoming a teacher, the best of the books that are pronounced children's classics. Only recently I was told of a senior student in a famous school for teachers who asked in the library for Grimm's tales. Is there not a deficiency there that will be a tremendous handicap in understanding the proper food for a child's imagination? Is such a one ready to teach? Then, the wonderfully good books *about* children, but for older people, from which, through the minds of men and women of genius, a better insight into childhood can be gained directly by an ordinary mind. What a tremendous insight one receives through the eyes and mind of Emmy Lou! Those who are to become teachers should have instruction, definite and reliable, as to what books are in the world, how to use them, where they may be obtained, where they are collected, and how they are distributed. This is the information that will be invaluable to them as teachers, as citizens, and as intelligent beings. They should be able to class books in their proper place, whether as tools or as friends. It is necessary to those who essay to use them to know the best tools among books, just as it is in any other calling, and no one will dispute the fact that as intelligent care should be exercised in choosing friends among books as among people.

The normal school, training the teacher to go out to teach is the most economical place to have this instruction given. Having the training schools in connection with them, the adaptation of the books and work to the children can be tested and adjusted at the least cost in time and effort.

3. To come to the third and last view, that of the public library, we may turn to all that is expected of the school library, and of the normal-school library and say: All this it is, and more; with a broader, deeper, and perhaps higher extension, bringing in all humanity, forming indeed in its best examples what Carlyle calls the people's university. In its principle of collecting and distributing information it reaches out to every grade and class of society. It offers to every man, woman, and child in the community, without regard to age, sex, class, religion, or politics, the means of universal self-culture. The voluntary side of the work of the public library gives the individual freedom of action in forming his ideas and standards, and thus does a larger work in a way than a school library. The well-equipped public library has its special librarians — well-educated, broad-minded, sympathetic men and women in touch with every vital force in the community, ready to guide, assist, and teach the children in their own specially equipped department, and to be of service to the student, the specialist, the learned and the untaught, the wise and the foolish, and who, actuated by that indefinable something called the library spirit, are indeed potent factors in the scheme of education. In many cities, if not indeed in most places, there is the closest sympathy between schools of all grades and classes, and every organized educational movement, and the public library.

The school libraries are, in fact, branches of the public library in many places, and the plan is being still more widely adopted all the time. It is believed by many that this plan is a wise one, because, as is set out by Mr. Dana, of Newark, N. J.— an eminent authority on schools and libraries:

> With the changes which are occurring in teachers, in methods of teaching, in methods and subjects of study, it is often well to change frequently the books in each room, in part or in whole. This can be done by the public library, if it owns the books. The library also can better look after repairs, binding, selection, purchase, methods of lending, etc., than can any individual teacher, or can any portion of the school machinery. In fact, the ideal condition seems to be that in which the public library, under the general sanction

and supervision of the superintendent, and with constant consultation with individual teachers, extends its system of lending to every schoolroom in the city, making that system as flexible as conditions demand. In sections of the city remote from the main library it includes suitable books for children to take home for their parents as well as for themselves. The public library is the extension of the school system, at public expense, to those who, by reason of age and poverty or stress of whatever kind, may not avail themselves of the school at an earlier period.

Every student within the walls of the library being there voluntarily, no matter what the subject of his research, is adding to the intellectual wealth of the community. Even expensive works of reference consulted by only a few, but these in earnest, are justifiable, because the result of the study, when expressed in products, is the property of the community at large. Preachers, teachers, scientists, mechanics, sociologists, students, every interest of the community represented by a page of print, find a source of helpfulness in this extension and exponent of the school system.

I cannot close this hasty plea for a plan for the library and a wider use of its material so well as by quoting from the eminent English writer, H. G. Wells, who in an article in the *Fortnightly* last year, on "Mankind in the Making," has this to say:

> The question of book distribution is as vitally important to the intellectual health of a modern people as are open windows. No nation can live under modern conditions unless its whole population is mentally aërated with books. . . . . There was a time when education was conceived of as a matter of learning. Our work now is to broaden both the conception of research and of teaching to recognize that whatever imports fresh and valid aspects, not simply of chemical and physical matters, but of æsthetic, social, and political matters, partakes of the honor and claims of research, and that whatever conveys ideas and aspects socially and clearly and invigoratingly, not simply by words of mouth, but by book or picture or article, is teaching. The whole business of bringing the contemporary book most efficiently home to the general reader, the business of contemporary criticism, the encouragement and support of contemporary writers, is just as vitally important in the modern state as the organization of colleges and schools, and just as little to be left to the enterprise of isolated individuals working primarily upon commercial lines of gain.

THE TEACHING OF A LANGUAGE IN THE ELEMENTARY SCHOOL

LORLEY A. ASHLĖMAN
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Experience has shown that there is nothing which should be more carefully considered by the language-teacher than the child's great love for dramatic representation. His innate need to act, to move, if rightly met, is one of the beautiful provisions of nature always at the teacher's disposal, to be used as a means for the successful teaching of a language. "C'est la nature," says Pestalozzi, "qui nous donne notre premier langage. Ne pourrait-elle pas nous en donner dix autres de la même manière?" And we must bear in mind that action counteracts to a certain extent the feeling of constraint not wholly avoidable in the teaching of a language. In language work, especially, the child cannot learn by simply hearing and repeating. The ear alone cannot give him the "feel" of a word. He must comprehend the thought through as many natural channels as possible, and make it part of himself by actively expressing it in more ways than one.

To put the breath of life into the dry bones of grammatical exercises, and into the construction and memorizing of sentences — for we assimilate a language sentence by sentence, not word by word — is the great problem confronting the language-teacher. Forms must be learned — there is no avoiding that; and the form cannot be learned without the learner's thinking in the language itself. Thinking is conditioned upon the representation of something in the mind. In learning through games the child is dealing with real facts, for he is actually living them; he is representing something, consequently thinking something, and the forms in which he thinks will remain his permanent possession. The teacher need never fear that she will not secure repetition enough of sentences to guarantee their accurate pronunciation. Children love to repeat a game or play over and over again. Indeed, the and supervision of the superintendent, and with constant consultation with individual teachers, extends its system of lending to every schoolroom in the city, making that system as flexible as conditions demand. In sections of the city remote from the main library it includes suitable books for children to take home for their parents as well as for themselves. The public library is the extension of the school system, at public expense, to those who, by reason of age and poverty or stress of whatever kind, may not avail themselves of the school at an earlier period.

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A teacher recently was rather surprised, when playing with her children after the Christmas holidays, to have them correct her on a certain point. Having forgotten the exact words she had used, she had slightly changed them. She explained that in French there were two or three ways of expressing about the same meaning. The children seemed incredulous. "Well," she said, "do you always say, 'How do you do?' when you meet one of your mamma's friends?" B thought he did. D said: "I don't! I just say, 'Good morning!'" C added: "My mother says, 'How are you?'" The ball was rolling; they were noting resemblances and differences; we were touching on the true value of words, and accurate and inaccurate usage.

In the repeated games the foreign language becomes a reality to the child; a "language," not a slow translation; for there is nothing in the nature of translation connected with the process. The association of the foreign phrase is not with an English form, but with the actual fact or mental conception. This is important, for as Gouin so clearly put it:

> In a language there is hardly a single word which has its exact equivalent in another language, any more than one blade of corn has its exact counterparts in all the corn-fields of the world. . . . . Each tongue reckons more than a hundred thousand locutions absolutely untranslatable term for term in no matter what other tongue; these phrases, said or reputed to be translatable, are only so in approximation or by exception.

But though these forms, this framework of the language, must be learned by all, and in the same way by all, there uniformity ends. A child's success in a game depends upon his self-exertion; his individuality has free play. The teacher finds that games and plays arranged to come out in a certain way develop quite otherwise when the children bring their own interpretations to bear. Again, the unconsciousness of the normal child is a factor of immense importance. So absorbed can a child become in a game that he is entirely unconscious of carrying it out in a language other than his own.

The pleasure that the child finds in vocal experimentation greatly facilitates the process of associating meaning with sounds. He imitates before he is aware that the sounds convey meanings. When, through facial expression, gesture, or action, he discovers the meaning, he is still more desirous to produce the sounds. The kindergarten children singing and playing "Sur le pont d'Avignon" are attracted by the melody, the action, and the new sounds. The strange tones, with their fascinating newness, they unhesitatingly reproduce.

The children of the first and second grades were much interested in dramatically singing the round, "Il était une bergère." The words of the round are simple, and therefore especially adapted to children. The material and the action are so varied that they more or less directly affect the individual child. The game is played in this way:

A large circle is formed. "Attention!" says the leader. "Voyons, Marie, vous êtes la bergère. Jean, cherchez un bâton. Donnez-le à la bergère."

Jean: "Voici, Marie."

Marie: "Je vous remercie."

Jean: "Du tout."

The leader continues: "Harold, vous êtes le papa mouton; Catherine, vous êtes la maman mouton; et Fréderic, le bébé mouton." Only a complete family will satisfy children, and the baby is one of the important features. Part of the circle is marked off as the hillside.

Leader: "Donald, vous êtes le chien de la bergerie, gardez bien les moutons."

The sheep watched over by the shepherdess and her dog, begin to graze peacefully on the hillside. A gymnasium bench at the other end of the circle represents the kitchen of the shepherdess, a large dumb-bell her churn.

Leader: "Margaret, vout êtes le petit chat."

The circle skips gaily and sings the little song with its refrain imitating the purring of a cat:

"Il était une bergère,
Et ron, ron, ron, petit patapon;
Il était une bergère,
Qui gardait ses moutons,
Ron, ron,
Qui gardait ses moutons."

The sheep, having now eaten enough, lie down and go to sleep, and the dog keeps watch. The *bergère* enters her kitchen and proceeds to make the cheese. The little *chaton* slyly slips up and tries to approach the churn. The circle skips the other way and sings:

"Elle fit un fromage,
Et ron, ron, ron, petit patapon;
Elle fit un fromage
Du lait de ses moutons,
Ron, ron,
Du lait de ses moutons.

"Son chaton la regarde,
Et ron, ron, ron, petit patapon;
Son chaton la regarde
Avec un air glouton,
Ron, ron,
Avec un air glouton."

The circle now stands still and sings with *la bergère:*

"Si tu y mets la patte,
Et ron, ron, ron, petit patapon;
Si tu y met la patte
Tu auras du bâton,
Ron, ron,
Tu auras du bâton."

The litle cat, very much frightened at the sight of the stick, quickly gets out of the way, to the great delight of the circle.

The playing of the toy animal store was much enjoyed by the children of the first grade. The animals chosen for the store were remembered from the preceding games and rounds: *le chat, le chien, la souris,* and *le mouton. Le cheval* and *le lapin* were next chosen; then came *la vache, le lion,* and *l'éléphant.* One child was storekeeper. A large chair was his desk, a kindergarten chair his stool, a pencil the key with which he wound up his animals, and a drinking-cup the oil can.

Le marchand: "A, vous êtes le coq."

A took a kindergarten chair, placed it against the wall, sat down, and became a toy animal.

Le marchand: "B, vous êtes le mouton," etc.

As soon as there were animals enough in the shop, the marchand went to his desk and was busily making out his accounts, when a customer entered the store. (These little details mean a great deal to the children, as is made evident by the earnestness with which they act them out.)

Le marchand: "Bon jour, Madame."

Le client: "Bon jour, Monsieur."

Le marchand: "Que désirez-vous, Madame?"

Le client: "Avez-vous des animaux?"

Le marchand: "Que, Madame, j'ai un chat, une souris," and he proceeds to show her his stock.

Le client: "Montrez-moi le coq."

Le marchand: "Très bien!" He takes down the *coq*, winds him up, pours a little oil in his joints, and off hops the toy rooster, crowing at the top of his voice. Suddenly he runs down.

Le client: "C'est très bien! montrez-moi le lion." The lion is taken down, wound up, and off he goes with a terrible roar.

Le client: "C'est bien. Voulez-vous me donner le coq?"

Le marchand: "Oui, Madame, si vous pouvez l'enlever pendant que je compte un, deux, trois."

The marchand counts *un, deux, trois;* if, when he is through counting, the buyer has lifted the *coq* from the floor, it is his, and after saying, "Au revoir, monsieur," he takes his purchase home, and another customer comes in.

In these little games the child assimilates the subjective as well as the objective language. The little words, *bien, très bien,* which the teacher and the pupil interpose simply and naturally, belong to an important category of expressions which forms a language of itself. Guoin says that he has collected more than sixty thousand of these expressions. Besides, in the friendly greeting, "Bon jour, monsieur," "Je vous remercie," "Il n'y a pas de quoi," he has developed the sentiment of politeness and consideration for others; the intellect and the heart have gone hand in hand.

Another animal game gave the children the greatest satisfaction. This was partly due to the fact that a number of the expressions had become almost instinctive to the children.

MADAME LA POULE, MONSIEUR LE COQ ET MONSIEUR MINET

The game called for a barn. The children, seated on kindergarten chairs, formed the four walls of the barn. The chairs were placed closely together, so that neither cold nor wind might harm the *vache*, the *cheval*, and, above all, *madame la Poule*, whose duty it was to keep the eggs warm. A large waste-paper basket made a nest, some white drinking-cups the eggs.

Le directeur du jeu: "A, vous êtes madame la Poule." (*Madame la Poule* crouches down behind the large basket and covers the eggs with her hands.) "B, vous êtes le coq." (The *coq* flies up on a beam of the barn [a chair], and appears much interested in *madame la Poule's* nest.) "C, vous êtes monsieur Minet." (*Monsieur Minet* goes into the garden and basks sleepily in the sunshine.) *Madame la Poule* cackles; *monsieur le Coq* hops down from his post, struts into the garden, flies up on the highest post of the fence (a chair), and joyously announces to the world: "La poule a un œuf, cock-a-doodle-doo, la poule a un œuf." The announcement greatly interests *monsieur Minet,* who stretches himself with a "Meow," and then creeps into the barn, followed by *monsieur le Coq,* who does not intend that any harm shall befall *madame la Poule.*

Monsieur Minet: "Bon jour, madame la Poule."

Madame la Poule: "Bon jour, monsieur Minet."

Monsieur Minet: "Avez-vous un œuf?"

Madame la Poule: "Oui, Monsieur, j'ai trois œufs."

Monsieur Minet: "J'ai faim, voulez-vous me donner un œuf?"

Madame la Poule: "Non, Monsieur."

Monsieur Minet: "Eh bien, Madame, j'ai des griffes." And with that he tries to get into the nest; but madame la Poule is ready for him.

Madame la Poule: "J'ai un bec." And she flies at him so quickly that monsieur Minet, in great fright, makes for the garden, to the great delight of monsieur le Coq, who greets him with a joyous "Cock-a-doodle-doo!"

Some first-grade children had just finished playing the game one day, and, as the bell was expected to ring at any moment, the teacher thought it unwise to begin another game. So, sitting down in the barnyard, she turned to a boy and said: "Avez-vous un minet?" "Non, Madamoiselle," was the quick reply; then, holding up his two fingers: "J'ai deux chiens." The children were so interested telling about their different animals that they were disappointed when the gong sounded.

The French sounds did not daze them; they were comprehended. The answers proved that they were assimilated; they were naturally combining and recombining their impressions.

It would seem that the dramatizing of such subjects of interest in the social life of the school as lend themselves to this form of expression was undoubtedly the truest and the broadest means of arousing the child's interest in another language. Moreover, it gives him the colloquial idiomatic French of which Professor Cutting, of the University of Chicago, has so clearly shown the value.

> Not in the more dignified form of literature, but in the language of the fireside, of the market, and of the social gathering, is revealed the idiomatic twist of the national thought. Pervading but a small fraction of the whole vocabulary, this national bias is at once the most significant and the most difficult feature encountered by the language-learner.

Idioms are not a matter of reasoning; they should be acquired at an age when things impress themselves naturally and deeply, when the mind accepts with but little questioning and picks up sentences as a whole.

In thinking in French, the child naturally tends to think about the things that the French people themselves think and talk about. Interests tend to become identical. National prejudice melts away. Plays based upon French festivals, on events prominent in French history, or on things characteristic of the life and feeling of the people, ideas and events that make up the very spirit and mental background of a young Frenchman, the finer breath and poetry of his youth, will certainly appeal to the enthusiastic nature of a young American. Therefore history needs to be freely drawn upon — the rich, picturesque kind of history that involves the study of manners, costumes, appropriate settings, and national music.

Thus the language that the child has unconsciously learned in his playtime he will possess and retain when a man as a priceless tool for his work. Moreover, he will always retain the historical impression, the manner, the setting, the spirit of the dramatic events in which for a time, with the single-mindedness of youth, he has felt himself really an actor. Best of all, having lived for a time in a community other than his own, he will have a sympathetic interest which makes the narrowness of provincialism impossible, and enables him to comprehend more truly his fellow-men.

WHAT IS ACCURACY IN ELEMENTARY ARITHMETIC?

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In a recent, widely circulated article, under the title "Arithmetic for Children under Twelve," we were told the old, old story — so old, forsooth, as to appear new again to its writer — viz.: "The chief value of number work lies in its contribution to the habit of accuracy, and children are not and cannot be accurate in the earlier stages of their development, as test investigations show." A little farther along in the same article we are informed: "Number work for this period should consist of . . . . (*b*) exercises in computation to form the habit of accuracy."

A different writer in another journal gives us a glimpse of personal administrative practice. He writes:

> For some years I have been accustomed to insist that the arithmetic work which calls for children in the lower grades to pursue steps of reasoning was positively wrong. Very little of it is done in K——— schools. We use all diligence to make our children quick and accurate in fundamental conceptions as pure memory work.

The writer obtained his elementary maltreatment in arithmetic from twenty-five to thirty-five years ago, in the schools of the same state in which the gentleman who penned the last quotation is administering his notions of elementary education in arithmetic, and under teachers who held this same conception of the educational function of arithmetic. It is truly amazing how an error, that is easily grasped and administered, does persist in propagating itself! Obviously, there are still pupils in this state who, like the writer, will have to unlearn most of that on which they spent time in school, and slowly awaken to a consciousness, after they have left school, that, as regards the arithmetic, their time in school was worse than lost. But if teachers learn with difficulty their true functions and duties, administrative officers seem to learn with difficulties doubled and twisted, what is their duty touching the arithmetic.

In a widely used arithmetic of recent date, whose chief distinction lies in the twofold merit of exhibiting (1) how fully elementary arithmetic may be formalized and mechanized, and (2) how necessary it is to prop up such a treatment with braces in the form of pedagogical notes to the teacher to excuse the author for much of his folly, we read the hysterical admonition: "A bank clerk who makes one error a day in carrying out his balances, which he does not himself discover and detect, would not retain his position." Again: "Remember that any inaccuracy in solving business problems makes the work valueless." Thus, after carefully and successfully blindfolding the pupil to the thought-value of arithmetic, the author takes off the blindfold at the foot of each page and flaunts the scarecrow of accuracy before the child.

The tenor of these quotations is in one form or another, the dominant note nowadays of discussions on arithmetic in the schools. Administrative officers seem to have a peculiar fondness for this view. Ask the teacher of any non-mathematical subject what ought to be attempted in early arithmetic, and you are usually met with the prompt reply that speed and accuracy are the things. Furthermore, many old-line teachers, most young and inexperienced teachers, and amateur students of elementary education generally, dismiss the arithmetic problem in the early grades with the same off-hand solution. Perhaps some attention to the matter will be pardoned here.

It is well to note that general acceptance of a view is not infallible proof of its soundness. In many cases it indicates almost nothing at all. The school public inherits tendencies, dons prevailing fashions, and contracts contagions as certainly and as easily as do our physical organisms. Before acknowledging obeisance to a prevailing idea, it is the part of wisdom to examine it. We cannot with justice be confronted with that dreaded charge of disrespect for tradition until we refuse to accept a well-grounded one. Let us then inquire a little into the nature of this thing which we call "accuracy" in arithmetic work.

First of all, accuracy in arithmetic is a mental, and neither a manual nor a mnemonic attribute. An element of thinking is a *sine qua non* of accuracy. Without thinking it is not only impossible "to contribute to the habit of accuracy," but it is impossible also even to generate the notion of accuracy. Pure memory work can no more beget even the idea — to say nothing of the habit — of accuracy than can health beget the conception of sickness. "He remembers inaccurately" is a contradiction, and "he remembers accurately" is tautology. He either remembers or he does not. There are no gradations of remembering as there are of temperature. This is especially true of formal number facts. Pure memory work does not touch accuracy at any point. It is absurd to talk of making "children accurate in fundamental operations as pure memory work." The sufficient reason that diligence spent in attempts to make children accurate in pure memory work is wasted is that the impossible is attempted.

In the next place, accuracy involves an external as well as an internal element. There must be a comparing and a judging between two factors before we can assert accuracy of any sort of work. In short, accuracy is predicable only after a comparison, and is itself a judgment. In arithmetic the two explicit or implicit factors are an idea and an effort to express it. If either of the factors is lacking, the very notion of accuracy falls to the ground.

Moreover, it is important to note that unless there be degrees of closeness, or adequacy, of expression of thought, accuracy has no meaning at all. Accuracy, in the only legitimate sense in arithmetic, means the degree of closeness of expression to idea — the adequacy of assertion to thought. Much of arithmetic is a language, an agency for expressing quantitative thought. The rest of it, and of course much the major part of it, is the thinking itself. If the pupil's expression is adequate to his number-concept in any given situation, the same mental satisfaction is felt by him in handling it as is felt by the most experienced adult who has struggled successfully to give adequate utterance to his more precise notions. The same wholesome issue in character, the same educative effect, results in one case as in the other. The idea that accuracy in number work means the degree of closeness of approach of expression to absolute correctness is useless, unattainable, and has not even the saving virtue of being correct. The most accurate users of language can do nothing more than express adequately their conception of the truth. When, therefore, we have to do with the formal aspects of arithmetic, the language side of it, we are attempting to draw aim on an invisible, and intangible, object if we insist that accuracy shall mean adequacy of expression to absolute truth. The constant effort to express one's ideas with precision, however, pushes the ideal continually nearer and nearer to the absolutely true. In other words, the use of precise language eventuates in the accurate *thinker*. The teacher can influence more accurate *thinking* only by seeing to it that the pupil "say just what he thinks." This attempt to express one's idea with perfect fulness is the paramount problem for the school. It is no more than the youngest pupil can do, and no less than he should be continually exercised in doing. The core-problem, be it remembered, is not a matter of symbols and technique so much as it is a problem of the defining of ideas.

The current conception that accuracy in number work is synonymous with a sort of target-practice precision grows naturally out of the thought that school work in arithmetic consists in fixing in memory the facts of the tables. The sums and products are remembered, or forgotten, and the tendency has solidified into a custom of looking upon that student as accurate who has only a retentive verbal memory. Test studies show pretty conclusively that the verbal memory is capable of, perhaps, the least development of all of the mental faculties. As a matter of fact, in arithmetic, the only sort of memory that needs looking after at all — and it should be looked after most diligently — is the rational memory. The two kinds of memory are rarely strong in the same person. The rational memory has little difficulty in holding a fact after it has been brought into relation with kindred truth. The strong rational memory implies the possibility of setting up relationships at numerous points with ideas already in the mind. The fuller the mind, the greater is the task of organizing the new element of knowledge into right relationships with what is already known. The thoughtful student is the slow student, because his task of assimilating the new idea is relatively great. It is this fact that puts truth into the admonition: "Pick your future student of mathematics from the slow arithmetic pupils." For from start to finish the would-be mathematician is he who has not only knowledge, but has "the knowledge that *knows that it knows.*"

The true conception of accuracy is secured by both teacher and pupil through measuring and the use of measurements in arithmetic work. The question naturally arises very soon: With what degree of accuracy should the measurements be made? This question must be answered by the teacher from two points of view, and by the pupil from only one. The teacher will ascertain, first, what is the smallest unit of which the pupil has, or can readily form, an adequate working conception. It is useless for the learner to attempt to work with a smaller unit than he can image. This sets the natural limit from the educational point of view.

In the next place, both teacher and pupil must study the question of the limit of refinement to be sought, from the view-point of the nature of the problem. If the problem is to find the number of plants needed for his flower-bed, it would be senseless to carry results to fractions. If he wants to cut a member for the frame of his playhouse, an eighth or a sixteenth of an inch becomes a serious matter, and must be attended to. Just here, we are reminded by some timid teacher, consists the difficulty in such work. No hard and fast rules can be set, and those of us who have not yet risen above rule and rote work grow quixotic at the imagined difficulty. How our arithmetic would thrill with life, if we could but see that the fine quality of training in arithmetical judgment, under purpose, which such questions furnish the pupil contains the very essence of educational merit! In the consideration of just these questions consists the difference between thought-work and mere words and symbols. Admitting such questions into the arithmetic class goes far toward generating, fostering, and strengthening the pupil's confidence in the truth that arithmetic is only organized common-sense. His number experiences thus become continuous with his life out of school.

We may now summarize the points of this paper as follows:

Accuracy in school work in arithmetic should mean the ***degree of adequacy of expression to idea.***

The criterion for the measure of accuracy to be striven for is twofold: first, the ability of the pupil to form a ***working image of the smallest (or largest) unit*** employed in the problem; second, the ***nature of the problem*** itself.

Finally, neither the conception, nor habit, of accuracy can be generated in the pupil by formal memory work alone; but with the correct conception of accuracy the young pupil of arithmetic can be just as accurate and just as truly accurate as the most experienced adult.

THE EXTENSION OF THE VACATION SCHOOL IDEA

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The idea of vacation schools for the children of the poor is now accepted by everyone, and the demand for them far exceeds the supply. Schoolhouses would be kept open for them all summer if teachers, funds, and suitable places for excursions could be found. There are, moreover, many parents in moderate circumstances who are unable to spend much time in the country, and who would be glad to send their children to vacation schools if there were enough to accommodate them. Few persons will deny that there should be some way of increasing the number of vacation schools in the city and of getting more of the country into them, but there are some who go so far as to say that they should be in the country, and that any vacation school in the city is at best a poor makeshift.

There is almost as much need for vacation schools for the children of the well-to-do as for the poor, but the reasons for the need are somewhat different. Parents who can afford it are spending more and more time in the country, often taking their children out of school by the first of May, because the rest of the time can be more profitably spent in other ways. Exact information as to how these children spend their time cannot be obtained, but it is doubtful whether, on the whole, their energy is any better directed than that of the children of the poor during the vacation period. We consider "organized play" very important for the child who has only a school-yard or a small public playground to use, but it is just as important for the child who has all out of doors. The incongruity of a crowded day for nine months of the year and purposeless activity for the other three is beginning to be generally felt. Many parents make great efforts and spend large sums of money to place their boys in vacation camps under the care of responsible tutors. Some try to find places on farms where they may co-operate to some extent in the industries of rural life. The feeling that the latter is a very desirable occupation for both boys and girls in the summer time is so general that it is scarcely necessary to explain or defend it. It would be the most simple solution of the problem to place city children in country families to whom they are related or with whom they are connected in some natural way, if farm homes could be found that were of equal cultivation and intelligence with their own, and if the farming operations were carried on in such a manner as to be on a par with the industries which they observe in the city. This, however, is almost never the case. At least 95 per cent. of the farming of the country is carried on in a haphazard manner that would be tolerated in no other industry. The hard physical labor and mental stagnation of most farm life can only be demoralizing to boys and girls who have been trained to other standards.

There should be some way for children who go to the country to make the most of the magnificent opportunities it offers in science, to come in contact with real things, and to co-operate in productive labor. Nature-study as introduced into the great majority of city schools is a dilettante affair. If pupils could do laboratory and museum work in the winter, and in the summer do field work in botany, biology, entomology, and geology in connection with some applied science, the results would be far more satisfactory. Farm architecture, field engineering and machinery, animal husbandry and horticulture, represent the applied side of much that pupils in the elementary and high schools study in the winter. A few hours per day spent in these occupations would furnish recreation and delight to almost all boys and girls. Modern educational theories recognize the value of a variety of handicrafts and try to reproduce in school the era of handicraft for its cultural value. If in addition to this, the pupils could spend their vacation time under the conditions furnished by the most modern rural life of today, they would get further culture out of the industries of the present and an efficiency in getting control of the processes of nature that they do not get in mere recapitulation of the past. In other words, if there were model farms to be found where children from the elementary and high schools might live during the summer with teachers who knew the practical side of horticulture and animal husbandry as well as botany and biology, the interest of the pupils would be many times multiplied. The same may be said of domestic science, if the child could see the processes of growth and development of the food supply.

A child's vacation should not, of course, be given to science alone, any more than it should be devoted to literature or athletics alone, but it should be spent according to a plan that would harmonize with the curriculum of the school year.

The problem of democratic education is to provide a public-school training that will meet the needs of all classes, which will prepare, so far as it goes, equally well for any kind of life. The objections which might be urged against vacation schools in any but the crowded districts of the city would doubtless be (1) that this would make child-life too strenuous; (2) that it would tend to make education utilitarian and not merely cultural.

To the first objection it may be answered that the healthy child makes his own life more strenuous than anyone can make it for him. He is always active, is almost indefatigable, loves responsibility, and knows perfectly well whether he is accomplishing results or only killing time. He is never more offended than when told that his work is useless in itself, but then it has kept him busy and taught him methods. Up to the beginning of the adolescent period the normal child is not a great reader, but he is incessantly busy and will do a good deal of work without knowing it. Children love the country and its activities because they can comprehend them better than the more complex life of the city.

To the second objection it may be answered that if the vacation school in the country were made an all-the-year-round school and continued through the high-school and university periods, it might easily become a training for the profession of agriculture, but during three or even six months of the year of the elementary and high school it would be a valuable preparation for any kind of life. The proper proportion of training in languages could be attained by association with French and German teachers; history and literature might be read part of every day; athletics would take care of itself; and social life would be free and natural. Viewed as a general preparation for life, the value of childhood and youth spent in the country has long been known. If this period had been occupied with the best scientific training as well as the discipline of labor at a variety of occupations, the army of farmer boys who go to the city would have included a much greater number of eminent men.

A vacation school started on a model farm near Chicago would be an experiment worth trying. It would certainly be possible to plan a course of from three to six months, so correlated with the curriculum of the School of Education that it would be a most valuable supplement to the work of the winter. Such a school would not be a measure of temporary relief, but a constructive step that would be attended with important consequences in many directions. Life in the country in the spring and summer has no hardships for children, and few for grown people in these days of telephones, electric cars, and rural delivery. A colony of parents surrounding such a school might be a possibility. Certainly it would not be so difficult to get teachers as for the vacation schools in the seventeenth and nineteenth wards of the city. The ever-present need of funds for experiments in education might be partially met by making the school as nearly self-supporting as possible. Practical difficulties in the way of such an experiment would not be found insuperable, if a sufficient number of persons were convinced that it would be a logical step in educational progress.

IS THE ELEMENTARY SCHOOL CURRICULUM ADJUSTED?

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The thoughts laid down in the following pages are centered around certain ideas which, less than a half-decade ago, began to take definite shape in many minds. These ideas, while as yet somewhat vague, were in the earlier days chaotic indeed. Beginning about the time I have indicated, the student of education could not have failed to notice a certain unrest in matters educational — an unrest voicing and manifesting itself in somewhat different manner and with more positive expression than formerly.

I am likely to be reminded that this unrest took shape fully three decades past, and that a constant change and a steady advancement have been noticeable ever since. Some are perhaps willing to go farther and say that since the times of John Locke and Comenius, of Rousseau and Herbart, of Froebel and Pestalozzi, educational thought and practice have been ever moving toward a higher level. More than this, we should probably all agree that the fundamental principles laid down in Aristotle's *Ethics,* or in Plato's *Republic,* are not transcended at the present day. Granting this, however, we must admit that the past few years have wrought an additional change on the face of educational affairs. True, many will not see this, or, seeing, will not admit. These, however, must eventually do so.

For a long time past it has been the secondary school that has first received the attention of educators, when a new order of things seemed imminent or desirable in the public school. So in England, in Germany, and in America has the secondary condition been discussed. The full force and significance of these discussions are now being felt by what is by far the most important and vital part of the whole educational organization of the present — the elementary public school of America.

Mr. Michael E. Sadler, a thorough English educationalist, has thrown much light upon the problem in his report on "The Unrest in Secondary Education in Germany, and Elsewhere." Other prominent German, English, and French schoolmen have agitated the problem, while with us as exponents of a broader elementary-school curriculum may be mentioned Dr. William T. Harris, Mr. John Fiske, Colonel Francis W. Parker, President Nicholas Murray Butler, President Charles W. Eliot, Dr. G. Stanley Hall, Professor William James, Dr. Frank McMurry, and Professor John Dewey, not to speak of a host of others. These men have, each in his own way, been insistent in demanding in our school work something that shall be real rather than artificial, vital rather than indifferent. They have pleaded for an education such as has been aimed at, but is as yet far short of realization.

Upon certain of the most important and fundamental principles underlying our educational fabric there is and has been an almost unanimous agreement. It is only when we as individuals come to the practice of these principles — only when an application is made — that a serious disagreement is noticeable. Indeed, it is only too frequently the case that no application is attempted. How clearly in the past has the purpose of the school been stated, and how almost universal has been the acceptance of the definition! In actual practice, however, the work has not been in harmony with the stated purpose of the school. There has been little contention as to the function which the child is to serve when he becomes part of the world in which he shall eventually find himself. Our methods as practiced, however, would hardly be recognizable as having any foundation in the thought of future citizenship. Theory and practice are at variance, and as a result violence has been done the child; the past has laid its hand upon the school, and we have held to old courses of study, dusty with layers of tradition or mildewed by decades of bigotry.

In some instances, to be sure, the better in the old education has been displaced by the less valuable in the so-called *new*. Subject has been added to subject, scheme to scheme, creed to creed, until pupils and teachers alike find themselves in an educational maze from which only the freedom of the outside world can extricate them.

This unrest, then, of which I have been speaking, is felt from the kindergarten through the university. From what at first was a feeling there has developed a conviction that our schools have too long existed for the benefit of the few. The upper grades are administered in the interest of the 6 per cent. who pass from the primary years; high-school courses of study are carried on with the view of meeting the requirements of a fortunate 1 per cent. who come to them, while college and university curricula take into account only a meager number, who, through circumstances or by birth, are enabled to avail themselves of the advantages of a higher education. What our elementary schools should furnish above all else is the elements of such culture- and thought-bearing subjects as shall the better introduce the pupil into the social, the industrial, and the moral life of the day, and of which each is a part. The school of elementary grade today is a long call from squaring with its avowed mission in this regard.

The great mass of boys and girls who early are compelled to take up the problems of actual life should find in the school that which has been prepared expressly for them and which best meets their needs. They find, instead, work better suited to those who, whether they will or not, enter and take advantage of upper-school work. With a proper adjustment of elementary-school courses, all that great mass of pupils who leave below high-school age would go out better prepared to take part in the life before them, and many who now leave school at an early age would continue their work into and beyond the high school.

To reach the great mass of boys and girls, and not only to reach them, but to keep them in school for a somewhat longer period, is then our problem. The tendency of educational thought is toward this end. His tuition in school is much too short for the boy to acquire those elements which make for moral uplift, industrial knowledge, social ideals, and ability of leadership. You appreciate, I am sure, that I have in mind the unnumbered many who progress no farther than the elementary school.

Various are the causes of non-continuance in school. Poverty, sickness, overcrowding, poor enforcement of attendance laws, inability to keep pace with a given class, indifference, all conspire to lessen the tuition in school. More than all else, however, and deeper and more fundamental than these, is the fact that *the school does not furnish that which is demanded in actual life,* after the pupil enters the latter. The supposition has been that the school is the medium through which the pupil is enabled to determine the line of work, occupation, or profession he is best fitted to enter, after first bestowing upon him a general culture universally essential. Should this be the correct view, which it probably is in part only, the present courses of study would not work to the desired end.

How, then, shall the proper adjustment of the elementary-school curriculum be brought about? The answer, it seems to me, is writ so large that "he who runs may read," although the actual work of adjustment is far from accomplished. It is indeed but begun. The standard of the school has sprung from the belief that knowledge is power; that facts educate; that mental gymnastics produces the man. The standard of the real school must be found in actual life. It must be based upon the natural tendencies of the child; it must grow out of a knowledge of the boy as a social being; it must recognize the home, the community, the factory, the shop, the farm; civil, industrial, social, and moral institutions. Any curriculum worthy a place in our elementary school must be built upon a clear conception that reason stands superior to fact; that expression is of more value than technique; that human sympathy transcends in value the printed pages of a book.

"The works of God are all for naught,
Unless our eyes in seeing
See, underneath the thing, the thought
That animates its being."

To say where the adjustment should begin would be an almost hopeless task. In arithmetic and language, in history, in geography, in reading, and in the more fortunate schools even in nature-study, manual training, and art subjects, the husk is too often mistaken for the kernel. The form rather than the content is made the chief issue; the symbol is made to stand for the thing. The spirit is lost, the letter is the goal.

In mathematics and language, object-teaching furnished an advanced step over the older methods. But what do we find? In arithmetic, for example, to use a crude illustration, the $2+2=4$ problem, typical of the abstract, lifeless form of work so long adhered to, was changed to the so-called concrete form, and read, *two apples and two apples are four apples.* A moment's thought, however, will convince us that the latter form of the problem lies nearly or quite as far from the concrete as did the former. Here, too, it grows out of a mere statement of fact and not of the life-interests of the pupil. It should find its application in an immediate need. "A thing is concrete when it is in the midst of its meanings; a word to be concrete must not be disassociated, but in the context, in the midst of its settings."[1]

Look at it from whatever side you will, the idea is forced upon you that the curriculum of the elementary school is not calculated to meet the demands of the boy and girl. The child may be able to tell you the least common multiple of 4, 8, and 16, or the greatest common divisor of 3, 6, and 9, but can he tell why in New York city the market price per dozen of oranges is greater than that of apples, or the height of a pile of wood containing two cords if the pile is eight feet long and eight feet wide? And the saddest part of the whole matter is that, after he closes his arithmetic, the boy will probably never have need for the facts he has learned regarding the least common multiple or greatest common divisor.

In language work the child may be able to supply the missing words in the text, but does he contribute a readable paper in the history class, or speak intelligently when making an explanation? In reading, the words may be spoken, but is the selection one having any connection with the child's needs; will it broaden and deepen his sympathies, extend his knowledge of things worth while, and force him to feel, and be, and live his better self? In history, in geography, how often do we find the time put upon vague, indefinite things, or those of little value; facts and figures, dates and places, locations, boundaries, and battles! Each of these has a place, but to the grade pupil so much can be given which is rich and vitalizing, that great care must be exercised in the choosing. It is no longer a question of what is good in education; it is a question rather of what is best.

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[1] **Borrowed from Professor Frank M. McMurry.**

In his recent article "Experiments upon Children,"[2] Dr. G. Stanley Hall speaks of the present as a "metamorphic period" in education, and then goes on to say:

> A mere list of the fads now in practice in various places would make a long article. Idiotic busy work in the lower grades; learning to read without knowing the alphabet, so that occasionally children old enough to use a dictionary have to make up their arrears of knowledge to do so; blob drawing; typewriting and shorthand in the high school; four foreign languages for girls and boys in the early teens who have almost nothing in their minds to express in the vernacular; Latin and algebra in the grammar school; wood- and iron-work in manual-training courses that are wooden in their intelligence and iron in their inflexibility; sharply demarkated schools and theories of physical training which will not harmonize and give the children the benefit of the best in all; metaphysics of the effete German school for kindergartners, who ought to know something of nursing as now taught to high-school graduates, and to know the child's body which at that age most needs care; interest in the finished product, which is used for show, rather than in educational values; everywhere, and perhaps especially in English, content and substance subordinated to form; method whipped up to a syllabub that suggests some analogy between the graduates of certain normal schools and the mediæval barber's apprentice, who could set up for himself only when he could whip two ounces of soap into barrels of lather; the mechanism of marks and hearing lessons instead of teaching; the college dominating the high school, which is really the people's college, with its excessive entrance examinations; distraction among the multiplicity of different topics — these are some of the dangers, of which some are universal and others dominant in certain places.

While we may not subscribe to all that Dr. Hall says, we should at least be in accord with the spirit of his message. The curriculum has indeed been broadened, while at the same time it has not been made sufficiently deep. In just the degree school work does not furnish the power, does not put the boy in possession of himself, just so far is it failing in its function.

Perhaps no better conception of an elementary curriculum can be had than to grasp the idea of a socialized course of study. This means at once a change from present methods. The so-called traditional subjects are thought-subjects mainly. We have said, and truly, that the book lessons did not meet the demands of the developing child, as little expression accompanied the learning process. There was ample impression; there was no expression. In order to get the most from our history, or arithmetic, or science, the motor element must come in. While the introduction of hand-work in school has done much good, we have here swung as far to the opposite side; and while expression is not lacking, the thought-element plays all too small a part in our manual-training courses. Whether with work at the bench, in sewing, in the cooking-room, in the various hand-work processes and in the art subjects, the power to make or construct is not supplemented by the power to think. This last is due in large measure to the fact that for the most part the child is not allowed to put himself into the work. He follows arbitrarily some set of exercises or a fixed curriculum, and performs in a more or less mechanical manner a prescribed course of work; and this without particular reference to its fitness for the individual boy or girl.

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[2] In *Good Housekeeping* for October, 1903, p. 338.

It is John Ruskin who says:

> You can teach a man to draw a straight line and to cut one, to strike a curved line and to carve it, and to copy and carve any number of given lines with admirable speed and perfect precision, and you find his work perfect of its kind; but if you ask him to think about any of these forms, to consider if he cannot find any better in his own head, he stops; his execution becomes hesitating; he thinks, and, ten to one, he thinks wrong; ten to one, he makes a mistake in the first touch he gives his work as a thinking being. But you have made a man of him for all that. He was only a machine before — an animated tool.

If it is true that a lesson in history is really valuable only when out of the data and lists of facts the pupils draw conclusions and reason from cause to effect or from effect to cause, seeking an explanation of laws and principles in the life of the day, so may we believe that in the manual processes the thought-side must be emphasized by reasoning out the why, and by seeking to develop new or independent methods of procedure.

As Professor Jackman puts it: "The first demand of the mind is for motive."[3]

May not work of a constructive nature, the industrial processes, properly carried on, furnish one of the foundation-stones for the future primary-school curriculum? Dr. Dewey says that the curriculum should be "so selected and organized as to provide the material for affording the child a consciousness of the world in which he has to play a part, and the relations he has to meet." Accepting this, are not the media of the shop, the laboratory, the studio, the garden, best suited to bring about the desired results?

Dr. Dewey does not stand alone in his criticism of the present-day practices in the elementary school nor in his suggestions as to the remedy. In an address before the Department of Superintendence of the National Educational Association at Cincinnati in February, 1903, President Eliot said: "I believe there is as much mental training in manual work as in any book whatsoever;" and again: "I believe there is more value in manual work than in nine-tenths of the arithmetic in the schools."

Dr. Frank McMurry places *thoughtful* hand-work at the very base of elementary-school education, and in his book, *A Broader Elementary Education,* Dr. Gordy points out the function of manual training in the elementary curriculum. *Industrial-Social Education,* by William Baldwin, shows how the school work may be made to group around the industrial processes. Teachers generally seem to be recognizing the fact that in no way can we so well form a school that shall be parallel with, rather than angular to, the actual, every-day life of the child and the adult, as to adjust our programs to the industrial and social forms that go to make up our every-day existence.

Is it not easy to see, then, that we have been making, through our primary-school curricula, a sort of life in the schoolroom different from that actually existing outside of it; a life not at all real and certainly not ideal? The lack of interest has been mainly on account of this. With a program that shall fit the child's needs will come an increased desire to continue in school, a live interest in its many problems, an increased student attitude. Then, too, will the child see more clearly his relations to his fellows, his individual duties and responsibilities, and, while recognizing his own worth, will at the same time appreciate the meaning and significance of the community, the society, and the social whole of which he is only one of the units in the composition.

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[3] *Elementary School Teacher,* Vol. V, p. 60.

In summing up, I would not be understood as saying that every element in the present-day curriculum of the elementary school should be stricken out. Indeed, I have tried to show that many times the older, more conservative thought stands superior to a modern whim or tendency. But in the main the content of our school courses are not such as best meet the demands laid upon them by the mass of school children. So far different is the atmosphere of the school from that of real life that the pupil does not recognize the school elements as having vital bearing or application outside the school. In the school he works for show, for standing, and, while ready with the facts, loses or never finds their true meaning or application.

THE PARENTS' ASSOCIATION

MRS. FRANK HUGH MONTGOMERY
Secretary

[*Extract from Report of the December Meeting.*]

The subject for discussion, "The Methods and Principles of Teaching in the University Elementary and High Schools," was introduced by the Chairman of the Education Committee, Mrs. John O'Connor. She explained why the subject had been chosen and how it was in the line of the work of the Education Committee.

Mrs. O'Connor was followed by Mr. Wilbur S. Jackman, who traced briefly the development of the principles and methods of teaching, and showed that the methods must vary with every individual and locality; that the motive became of extreme importance and its consideration was ever coming up anew. The chief thing was the development of responsibility. Mr. Jackman spoke of the excursion. This gave the child an admirable opportunity to learn how to handle himself. The excursion presented the material, and his life in the schoolroom gave expression to his ideas.

As Mrs. Henry Kuh was unable to be present, Mrs. O'Connor read the paper which she had prepared. Mrs. Kuh said that she came to ask for information rather than because she had any to impart. She raised interesting questions in regard to the value of excursions, dramatics, and the amount of time to be devoted to them.

Mr. Owen was the next speaker. He said that the high school was between the upper and nether millstones. The college or university was the upper, with certain requirements which the high school had to meet. The nether was the elementary school. The most remarkable change in education in America had come in elementary schools. For many reasons, it had had a chance to develop. The high school must become a good experiment station under reasonable control. It must have (1) well-trained teachers; (2) a flexible organization; (3) parents who would permit a certain amount of experimentation and would have confidence. Let the parents investigate and contribute.

Mr. MacClintock, the next speaker, expressed his smypathy with Mr. Owen that the high school was not yet a place for free experimentation. He raised various questions in regard to practice-teaching, the existing grouping of the children, the autonomy of the grade teacher and the special teacher, correlation, and the place of the arts.

Mr. Belfield affirmed that the method of the high school in manual training was not to make things. It was not a trade school. The name, which indicated the training of the hand alone, was a misnomer; the object was mental training. It was true that the pupil often learned a great deal that was useful and could earn his livelihood, perhaps, as a result. The school stood for accuracy of thought, honesty of work, clean thinking, development of judgment and will-power. The great trouble with the American boy was a weak will.

Mr. Errant thought that everyone realized that there was something to be worked out. The high school must solve its own problem. He considered that in the manual training there might be a closer connection between things learned and the application. He wished that some of the funds which had recently been given to the University might be had for the working out of these problems.

The meeting adjourned.

EDITORIAL NOTES

The Distractions of Technique

Teachers are too much concerned with unessential details. They asphyxiate themselves and the pupils with the minutiæ of technique and with the infinitesimal divisions of subject-matter. Expression through language barely begins, when the thought that inspired it is drowned by a multiplicity of irrelevant facts relating to form; forthwith the emphasis goes to "language as such"!

With the first note of song begin the hammer and bang of drill upon meaningless symbols, standing for musicless sounds that give no voice to the melody in the soul.

Pictures of light, of color, and of form are imprisoned within by the barriers of technique; and while life is harrassed and wasted upon the barren mechanics of brush and pencil and paper, the pictures shrivel and dry, and forever fade from the face of the artistic imagination. This, all that there may be "art for art's sake."

The slow germination of thinking about the proportions and the relations of things is scarcely started, when technical processes, with shadowless symbols divert the mind from its natural channels, and endless drill finally results in permanent impairment of original mathematical power. That vision through the evolution of which the mind might have the means to clarify the world around about it, through the chatter of formulæ, becomes confused and uncertain, and the primeval chaos of the world remains with us as with the savage.

The Chief Offenders

There is hardly a subject in the curriculum where thought is not hampered, stultified, and often obliterated through the efforts to enforce technique. And the greatest sinners are the technicians themselves. They thrust their own refined method upon their pupils, whether they be in the university, the secondary or the elementary school, apparently forgetful of the conditions under which they themselves acquired it — if, indeed, they have ever done aught but copy from another.

Technique the Outcome of Thought

The technique of a subject is the easiest part about it. The natural relations of process and method to thought are such, that it is doubtful if any normal individual actually possessed of a clear idea ever failed because he could not give it appropriate form through expression.

Why Failures in Technique

The reason why we cannot draw is that we do not get the image which it is the province of a drawing to represent. Our pencil stops precisely where our seeing fails. Anyone can trace with a pencil or brush the outlines of a figure already drawn; there is no reason why he should not trace the same lines without the presence of the picture except in the fact that the mental image is missing.

It is not more difficult from the motor side to model a vase or even a human figure than it is to spread a slice of bread with butter and then eat it. By some mistake, certainly, the latter process, to date, has escaped the keen vision of the technician and we have learned how to eat in peace. When the drill-master discovers the oversight, folks who eat will probably become as rare as sculptors.

How Train for Technique

Not that people become technically correct all at once, nor can it be denied that there is necessity for the education of the nerves and muscles; but "the soul is the thing" which determines the correctness and the ease with which the training may be acquired. Teachers who would train pupils in writing start at the wrong place when they begin with the arm movement, and, to train in speech, they have something to do besides watching the glottis.

Discouragement of the Pupils

In spite of the struggle for form, it is seldom that the results are satisfactory, and pupils give up the striving with feelings of relief from the intolerable grind. Language, art, music, dramatics, writing, spelling, and mathematics all appear to stand as obstacles in the way of what the pupils would be rather than as the direct means thereto. It is only when one becomes inspired with his own message that, freed from the drudgery of drill, he turns to these forms of expression and, selecting the one most natural and effective, delivers himself through a technique of his own. One utterance giving voice or form to something that must be said — something that must take shape lest the world suffer — will do more for technique than all the "formal grammar," "formal arithmetic," "formal art," and "formal everything else" that can be crammed into the years of school life.

Pupil's Right to His Own Technique

We are just finding out that a child should "be himself" when he talks, but the discovery has gone little farther. It is, however, also true that he should give himself forth in song as in speech; in art forms as well as in writing; in poetry, too, when his inspired thought strikes the octave. The results attained justify no further waste of years in trying to make the pupil absorb a literary style from someone who wrote a "masterpiece" — a style for which the pupil has no thoughts to fit. When the notation of their own melodies that naturally grow just because children find things beautiful, good, and harmonious, take the place of the note-chasing that is now down on the program as "music" — save the mark — we shall find that our soil, too, will produce musicians.

What's the Remedy?

What is the trouble? Too much of littleness, of narrowness — too many minutiæ! Breadth, breadth, breadth, is needed! More superficiality; less thoroughness! Greater appreciation of huge crudities; less complacency with finicky niceties! More sympathy with movement; less emphasis upon sand-papered results! More attention to the pupil's power of original thinking; less stress upon his ability to copy! (The only original researcher is the child under school age; then he selects his subject and treats it at will. As a postgraduate, his topic is usually assigned, and he generally copies his method.) Less worry about what the pupil can say; more interest in what he can do! Smaller regard for what he knows; increased esteem for his influence! Less exacting as to obedience; a more careful nurture of personal responsibility! Not such assiduous industry with the "muckrake;" some contemplation of the "crown" overhead!

W. S. J.

Educational Experiments

Two articles appear in the pages of this number of the *Elementary School Teacher* descriptive of experiments in education: one a prospect merely, and the other a review of an institution which is long past the experimental stage, and yet is still spoken of by many in tones which prophesy a defeat of which the school has never yet given the slightest signs of verification. Both the farm school sketched by Mrs. Hill and the unique English school, Bedales, will probably fall under the stricture laid upon another attempt to make a school conform to an ideal in education, by a public-school man who said of the school in question: "Frankly, I do not like your school. It is doing what we never can do under our public-school conditions. Such a school can never be thrown open to any but the favored few. Ideal, I confess it to be, but an ideal that never can be realized for the masses. Your equipment, space, and small classes furnish conditions that the public can never afford." Similar objections are likely to arise in the minds of the readers as they peruse the articles referred to.

The Function of the Private School

It is a serious objection. The very depth of bitterness with which we hear it uttered indicates a corresponding keenness of sympathy for the needs and problems of the public schools which are first and last the chief concern of all of us. If it were not for that concern, some of these experimental stations would not exist. They should bear the same relation to the pressing needs of the big public-school system that the agricultural experiment stations do to the farming communities. The experimenter has a fund wherewith to work out his hypothesis. He has apparatus and time to devote to these objects alone. He finds, we will say, that by the cultivation of certain colonies of bacteria as nodules on leguminous plants his bacteria greatly increase the nitrogen-appropriating power of the plants. Success assured, the information and the materials are at the disposal of the farmers, the latter delivered ready for use like so many precious yeast-cakes.

The Outcome for the Community

The farmers working under pressure which precludes the full experimental use of their powers still are the gainers by the experiment of the specialist. The skilful and progressive farmer returns his report and practical suggestions from the field to the station. Just so the teacher whose hands are tied, comparatively, by her scanty appropriation for materials, and her large classes of children, cannot rush into work demanding apparatus and freedom until she sees clearly where the work will lead; what it means in power, in enrichment of the lives of her children. But these points proved and her own soul convinced, there is always a way of convincing those who can aid in changing the conditions under which she works.

The Fixity of a System, or the Parable of the Baker

There was once a young man who was taken in by the manager of a large factory to be trained up in the business. He was the son of one of the officers of the company. The young man went rapidly from one division to the next. At last, after working successively as an ordinary workman in the sifting, weighing, mixing, molding, and baking rooms, he was given charge of a room. He soon saw a chance to improve methods and lessen labor, having been himself brought up in those schools (beginning with the kindergarten) that develop initiative. He reported his plan to the manager, and was permitted to make the necessary changes, which, of course, involved the learning of new ways by the workmen. Soon another discovery was made, all in the line of progress, and another permission and another reconstruction followed in due order. A third proposition came up to the manager involving extensive changes in machinery and operation. This the manager vetoed, arguing that the loss of time, expense of changes, and friction in getting the workmen adjusted to new habits would overbalance the economic advantage of the proposed improvement.

The Application

Just as in the machine known as manufactory, so in the social machine of public school, there is such interlacing and interlocking of parts and functions that each change comes hard, and the managers fear the overthrow while really indorsing the idea involved. Changes involving the reduction of numbers, special training of teachers, and installation of tools have to come when the utility and eventual economy of these things have been established in a smaller and freer institution. So, while welcoming criticism and modification, let us not declare at the outset that these experimental schools and schemes are useless or worse than useless because we cannot at once see the possibility of making them contribute to the education of every child in the public schools. There never was an ideal realized that was not at one stage of the game stamped "utopian." The whole mighty advance from passive to active education has been in the face of obstacles generally pronounced "utopian," fifteen years ago.

Possibilities not Impossibilities

In this very idea carried out in one way at Bedales, to be carried out in another at Wheeling, in another at the George Junior Republic, and in other ways in half a dozen schools we might mention, there are a few fundamental propositions: that real work may be made a stimulus to scientific study; that the community of working, playing, and learning individuals, both children and adults is the most normal school, ethically and intellectually, and certainly physically; that such a school will not only conduce to mental and physical health, but will in a very practical way offer a new force to stem the tide of concentration in cities by offering interests and control in country pursuits; to refute the doctrine that these ideals are impossible of realization, save under certain specified conditions to be had only in private enterprises with private funds, we quote a few instances: the gardening at homes and schools, of Dayton, Ohio; the garden of the Drummond Vacation School, of Chicago; the gardens of the Chicago Bureau of Charities on outlying vacant tracts; the gardens in that most crowded modern city of Berlin, lying in a new part of the city where the paterfamilias takes his family of a Sunday afternoon, to work, and to eat under their own vine and fig tree; the many, many school gardens that are being conducted with intellectual profit, and some remuneration, in towns and cities and in country districts. All go to show that, given the great appreciation of a demonstrated good, there is more than one mode of realization.

B. P.

BOOK REVIEWS

The Culture Readers. No. II. By Ellen E. K. Warner. Chicago: D. Appleton & Co.

This book has the merit of making the first page of reading really worth while. Throughout the book other pages are worth reading. The pity is that all are not. To tell a commonplace thing in a commonplace way is not literature. To read such is not education. For instance, the following, quoted in part, occupies the greater part of two pages:

1. "Well, my dear, what are you doing?"
2. "I am sewing a mitten."
3. "Oh no, that is not sewing. That is knitting. Who began it for you?"
4. "My mamma began it. She is making a pair of mittens for me," etc.

To expend the time and effort which a little child exerts to read a page of printed matter deserves results which should be to him in proportion to that effort. Every such effort should leave the impression that it is pleasant to know how to read. The foregoing quotation is not stimulating to further effort. The child has got no thought which is worth getting. What is the purpose of reading, if not to gain thought valuable in its picture, information, or fun?

Some teachers use phonics as a conscious help to reading. Others use phonics with quite another purpose. Many teachers desire to keep out of the children's minds the processes of learning so far as possible. For this reason the lists of phonetic words should not be placed in the text which the children read, but in a separate place, that the teacher may use her discretion in her use of it.

The publishers are to be congratulated on the attractive print, paper, and pictures which make up the book.

Elsie Amy Wygant.

University of Chicago
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Larra's *Partir á Tiempo.* Edited by Edwin B. Nichols. New York: American Book Co. Pp. 66. $0.40.

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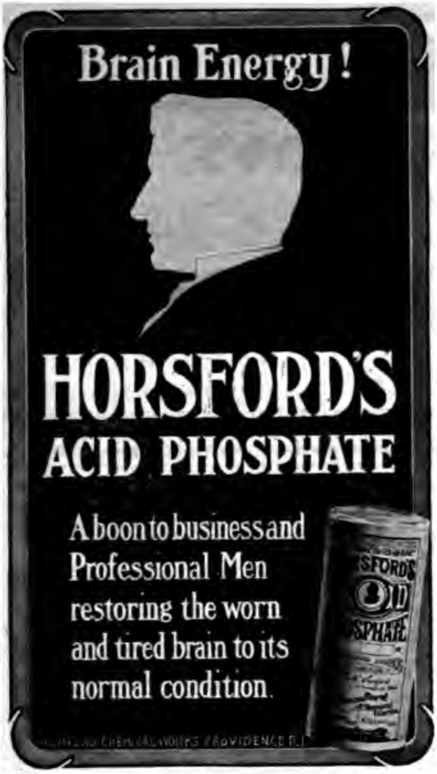
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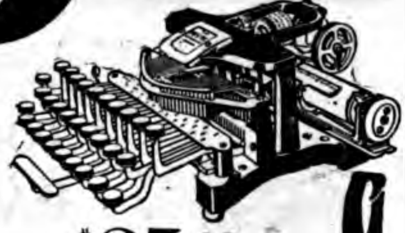

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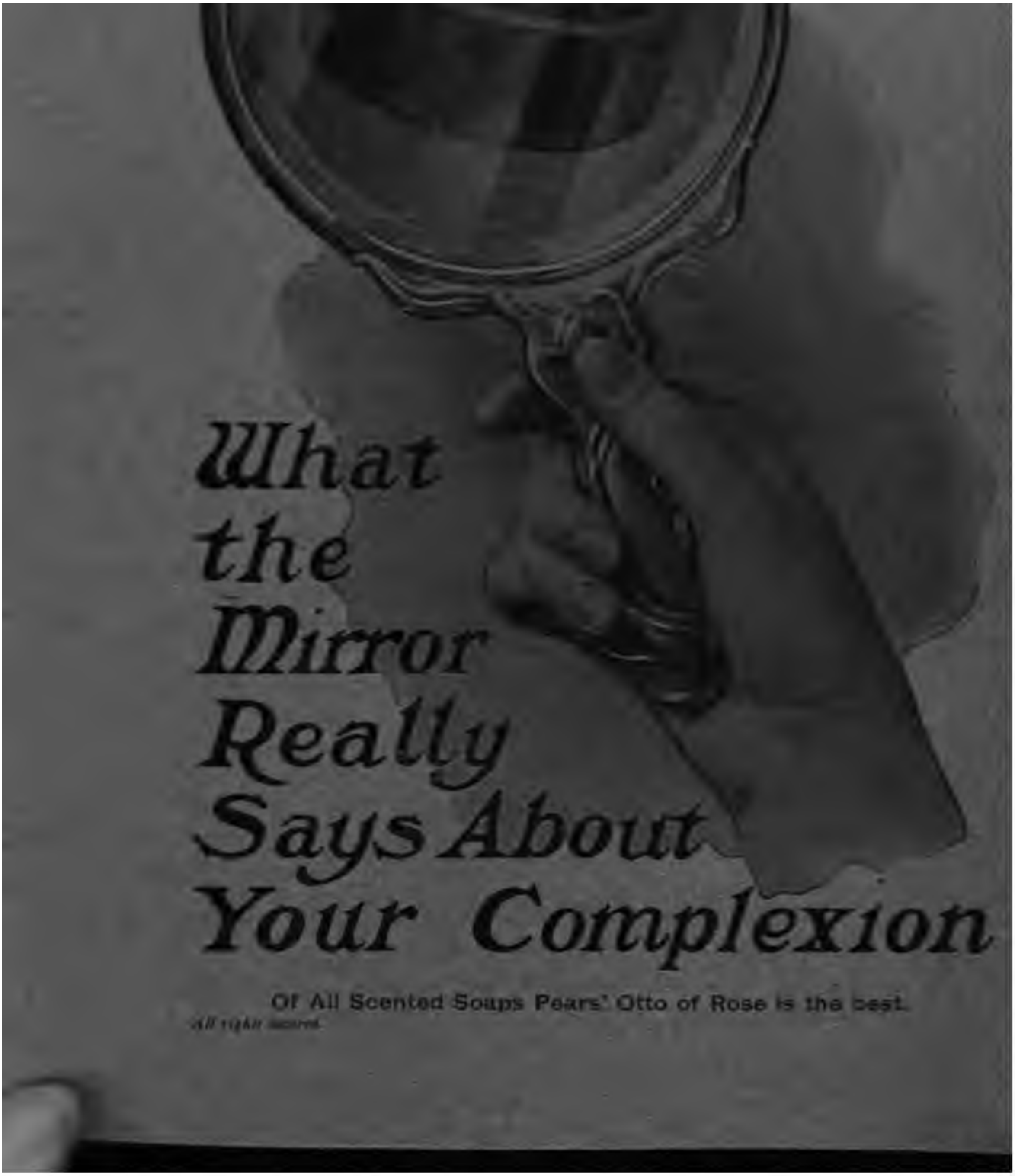
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CONTENTS FOR FEBRUARY, 1905

THE SCHOOL AT ABBOTSHOLME, CONDUCTED BY DR. CECIL REDDIE — PATRICK GEDDES 321

CHRISTMAS AT THE UNIVERSITY ELEMENTARY SCHOOL — MRS. FRANK HUGH MONTGOMERY 334

GENETIC PSYCHOLOGY THE BASIS OF A NEW EDUCATION — MRS. CARRIE R. SQUIRE 349

TEXTILE WORK IN LINEN - - - - - - - - - - EDWARD F. WORST 360

THE MAKING OF BEET SUGAR—A MORNING EXERCISE - HENRY T. MORTENSEN 364

NOTES FROM PARENTS' ASSOCIATIONS - - MRS. HELEN MALEY HEFFERAN 372

EDITORIAL NOTES - - - - - - - - - - - - - WILBUR S. JACKMAN 376

Home Work for Children; Home Work in the Past; Less, Not More, Home Work; Homes Not Prepared; Home Preparation Needed; What the Home Can Do; Cultivation of Spirit; Cultivation of Responsibility; Home Duties of Children; Bad Habits in the Home; Fraternities and Sororities; Where Is the Father? The Mother; Lack of Co-ordinating Influences; Type of Home Work Needed; In a Nutshell.

BOOK REVIEWS - - - - - - - - - - - - - - - - - - 382

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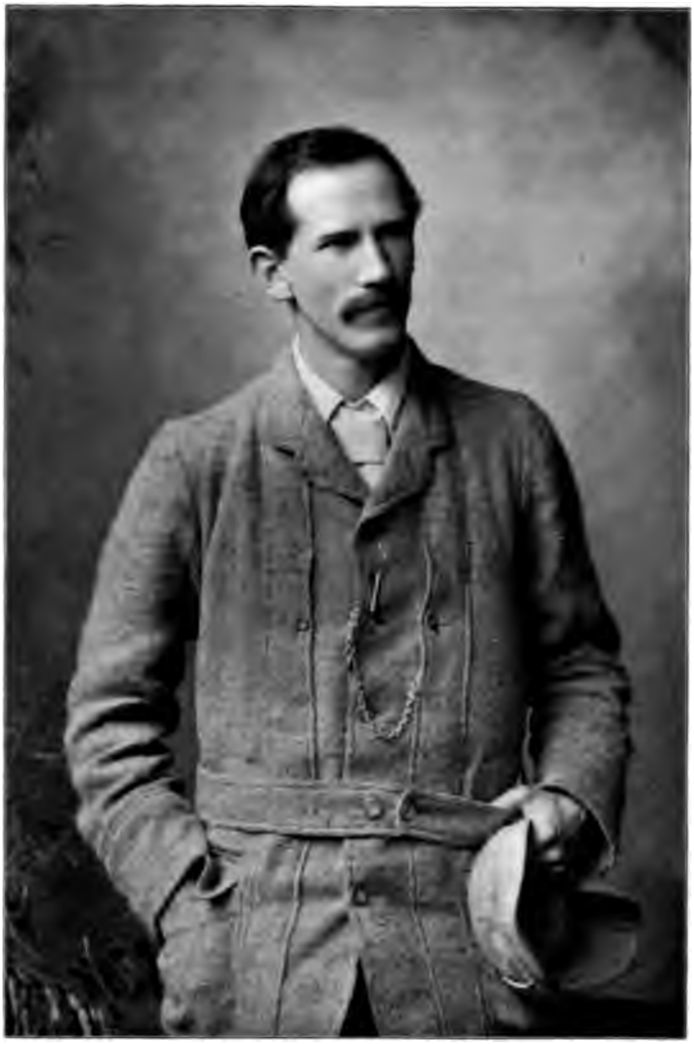

DR. CECIL REDDIE
Headmaster New School at Abbotsholme, Derbyshire, England.

VOLUME V NUMBER 6

THE ELEMENTARY SCHOOL TEACHER

FEBRUARY, 1905

THE SCHOOL AT ABBOTSHOLME, CONDUCTED BY DR. CECIL REDDIE[1]

PATRICK GEDDES
Edinburgh

I

INTRODUCTION

While personally of Scottish, London, and foreign education, I may claim to be in some respects all the more alive to the qualities of the English public-school and university systems, although, as is inevitable under such circumstances, also awake to their defects.

I have hence long been interested in Dr. Reddie's labors to create a school which, while retaining the admitted virtues of English education, should yet meet the requirements of the modern world in a more adequate way. I have felt substantial agreement with his vigorous criticisms of the educational world, and admiration for his no less fearless initiative; and I have often regretted that, here as so often, the prophet should still have too little honor in his own country. For many years I have directed foreign educationalists to Abbotsholme as the most active and progressive of English schools. One especially, M. Demolins, has made it the text of a well-known volume.[2]

---

[1] This article is an extract from a report on the school prepared by Professor Geddes. It is based upon a personal inspection of the school made July 11–18, 1904.— EDITORS.

[2] M. Demolins, *Anglo-Saxon Superiority* (from the French eighth edition), London, 1901.

Many independent visitors—French, German, American, etc.—have also from time to time communicated their impressions to the larger world, with comparisons strongly in favor of Abbotsholme, and these on many grounds. Better than criticism, however, the school has afforded an educational type, upon which, whether with generous acknowledgement or with insufficient recognition, new schools have been founded, alike on the continent and at home. Even in the present month I find in an important French review[3] an article by the director of the school of Liancourt, himself an English public-school boy and teacher of varied experience; and he, while an active rival and critic of M. Demolins, goes almost farther in his eulogy of Abbotsholme, and in the severity of his criticisms of the older type of school,[4] to which it is the arduous honor of Abbotsholme to furnish an example and lead.

Though thus interested in Abbotsholme since its foundation, indeed its very inception, I had unfortunately never found time to visit it; it was therefore with much interest that I accepted the invitation of the headmaster and trustees to undertake an inspection and report last July. To this inspection I devoted the whole of one week's residence, with some preparation beforehand, and considerable reflection since my visit.

Even if space permitted, I need not here enter into any detailed account of the organization of the school, especially as this is already clearly stated in its founder's writings and in the descriptions of previous visitors. While thus visiting the school with an open mind, sympathetic indeed to all its main aspects, I have been more especially prepared by my own work and studies to inquire into two matters in particular: (1) the Abbotsholme endeavors toward that better-organized associated life which is too much neglected in our Scottish education; and (2) the experimental working-out of a modernized curriculum, with adequate correlation and succession of studies — geographic and historic; scientific, linguistic, and literary; practical and artistic;

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[3] Scott, "L'éducation nouvelle," *Revue politique et parlementaire*, August, 1904.

[4] R. F. Cholmeley, "A Complaint of Public Schools," *Independent Review*, September, 1904, will also be found worth consulting.

in brief, naturalistic and humanistic. Both of these endeavors have, of course, to be judged, not merely by the traditional standards of the universities, but by their adaptation to practical life and social usefulness.

Thus, while I have visited the school prepared by an understanding of its general aims, it has also been in acceptance of a frankly expressed invitation to search out and unsparingly to criticise any weak spots in the ambitious program of the school or in the execution of it, and with the understanding that the more definite my criticisms and suggestions, the better for all concerned.

The following report, then, while warmly appreciative of many elements in the school, though with sharp criticisms of others, may risk conveying misunderstanding to some, especially strangers to it, since in analyzing the character of a school, as of a person, points of blame may to many seem to outweigh larger elements of praise. It is, however, I am convinced, the wish of the headmaster and the council, of the parents, the old boys, and other friends of the school, that every possible improvement should be made; and my desire is to be of service toward this.

I can most easily give my impressions of Abbotsholme by writing, in direct narrative form, a summary of my diary during my week's stay. Before my arrival a week had been devoted mainly to written examinations, and this had prepared stacks of papers for my perusal. Then haymaking had come, a welcome change of occupation for the boys, and giving also the masters time to look over the examination work.

I arrived on a Monday evening. Field work was in full activity. Never before had I seen a hay-field cleared with such order and rapid progress, yet all without the supervision of masters or the help of a farm laborer, the only exception being that the farm baliff himself was working with one of the boys upon the rick—the spot where the elder's skill was still needed to guard against the risks arising from inexperience.

The whole field was under the command of the "captain of haymaking," a senior boy, who had six squads, each under a corporal, one managing the cart, the rest loading or raking. The swiftness and order, the economy of labor, the cleanness of the field, all showed not only good organization, but thorough good-will.

After a couple of hours of this came the call to bathing, and in a twinkling the glowing workers were in the river. Here a fresh bit of organization appeared. Another boy-officer was on the bridge above the bathing-place conducting the "swimming tests." Every boy not disqualified by health is expected to go through a regular course, graduated from the simplest swimming, within depth and for short distances, to the difficult task of rescue work. That particular evening the diving tests were being passed, and, as an old examiner, I could not but admire the boy examiner at his work, passing or rejecting, usually with instant decision, yet wherever doubt arose giving a second, and in one case a third, chance.

A hearty and wholesome supper, well served in a spacious and dignified refectory hall, followed, and then a brief choral service, with well-chosen reading, in the stately though simple school chapel. From such an evening one could not but gather a favorable impression of this little community, vigorous in work and play, with its atmosphere at once of discipline and of culture.

Next morning, after chapel and breakfast, I was conducted by one of the senior boys over the school buildings old and new. We began with the magnificent "new block," of which the chapel and dining-hall furnish the main architectural features, but including also extensive kitchen and domestic accommodation in the two lower floors, with well-arranged dormitories, guest-chambers and sickrooms above, and at the top a skilfully isolated floor for infectious cases. Thence we passed to the old buildings, in which the larger rooms are used as classrooms and dormitories. The extensive outbuildings are utilized as workshops and laboratories, etc. As it was the annual haymaking time, the classrooms were empty, and field work was in full progress till bathing and dinner time. So unconventional a departure from ordinary school traditions as this of holidays for work instead of for merely play, no doubt helped to explain the vigor and steadiness of work which struck me during my visit. It showed that the school is guarding against

THE NEW SCHOOL AT ABBOTSHOLME

the too common mistake of expecting simultaneous efforts of mental and bodily exertion from growing boys, and is doing this by the sensible method of giving each of these culminating functions of the school year, examinations and haymaking, their proper turn. This raises the whole question of the school time-tables, both for day, week, term, and even year; but to these I shall return.

After dinner came another characteristic and admirable feature of the school life; the boys trooped up to the chapel for ten or twenty minutes' quiet, while someone, master or boy, gave a musical recital, which happened today to be one of the masterpieces of Wagner. In this way evidently two good habits — one bodily, the other mental — were being formed at one and the same time: (1) the simple physiological habit of quietly beginning digestion before resuming activity; and (2) on the side of culture was being acquired a wide acquaintance with classical music. The perfect quietness of the boys at this time, as also at other similar times, as, e. g., just before and during chapel — and this as much before any master came in as after — struck me as a strong bit of fresh evidence that the too common noise in schools is largely the expression of imperfectly exercised activities, and as a striking proof that the teacher who has found normal outlet for these activities will not fail to get all the silence and attention he may require. Quiet was further insured by allowing the few boys of little or no musical ability or interest to read quietly, either their "term-book" or some other, and by letting one or two who might have been only a disturbing element find some less uncongenial outlet elsewhere.

In the afternoon the school split up into cricketers and haymakers, the former to practice for a Saturday match; the latter to pursue hard yet happy work of their own, which protected them from the worthless habit of mere looking on and loafing, which has latterly made our games, however excellent for the few who actually play, so doubtful a blessing to the many who merely look on.

In the evening came one of the great functions of the Abbotsholme school year — the "Harvest Home Festival." This again was simply and excellently managed. The "last load" was taken up the hill to the hay barn on its summit, in full procession, led by all the available music of the school — drums and fifes, bugles and violins, a simple yet admirable picture, a true pendant to Mason's "Harvest Home" — that most perfect of all our idylls of rustic English life. Nor was a deeper note wanting. Just before the procession started a bonfire of weeds was kindled — symbolically recalling the lesson read that morning in chapel, the Parable of the Tares.

After the load had been stacked, the boys gave a concert in the chapel, which, pending the erection of the future School Hall and Theater, has at present to be used as a big school for all such functions. Here solo singer and instrumentalist, school choir and orchestra, all took their appropriate part, and appeared, as far as I could judge, to advantage. I regret that from deficiencies of my own early years I am not able to express any opinion upon the musical technique; but I could at any rate appreciate the spirit of the whole performance, and note with satisfaction that the non-musical boys were few, almost every one taking part in orchestra or in choir.

Next came an ample and joyous harvest-home supper, followed by toasts, in which the haymakers and their captain, the head and his outside guests, were all included. After this came the harvest-home service in the chapel, with appropriately chosen psalms and hymns, prayers and lessons, all with brief personal application to work and life. Afterward, in a long and interesting talk, the headmaster set forth to me more fully his deeply meditated and constantly applied ideas of the moral and educative uses of productive labor, and of the correlation of occupations and studies with art and literature, with music and morals — in short, of living out day by day the unification of religion and of life.

The evening ended in storm, the wind and rain, lightning and thunder, emphasizing impressively, for boys and elders alike, the day's lesson and symbol: "Work while it is day."

Next morning I divided between the reading of batches of examination papers and the study of the administrative details of the school, which are being gradually worked out in a series of sheets, well, indeed artistically, printed at the school press. As personally disposed in my own work to reduce formal regulation to a minimum, I must confess to having approached these elaborate regulations in a critical, indeed a skeptical, spirit. But I must also frankly admit that the more closely I studied these regulations, the more I saw in them. Beginning always with direct orders, simply expressed and easily obeyed, even by the youngest, they display the gradual development of a well-organized and well-administered scheme of action, so that the perfect order and discipline at haymaking or at swimming, which I had observed, was here set forth with corresponding clearness; in fact, not only summed up as custom, but codified as law. Indeed, I came to recognize this to be one of the carefully considered ways in which this school is organized to prepare its boys for intelligent action and citizenship in the larger world without; and my first dread of over-regulation was abated when I saw that the rules were, as far as possible, not an external code, devised in the abstract by the headmaster and imposed by his authority upon the boys, but a summary and codification of their own and their masters' practical experience; a body of laws, which practice and reflection, through successive years, had actually modified, and were still modifying. The school code thus becomes an introduction to the best aspects of law and order in the larger world, as well as to the modes of altering laws constitutionally open to an intelligent and orderly democracy. Though approaching this, as I have confessed, at first rather reluctantly, I came increasingly to recognize its educative value.

A very notable feature of these school regulations is that, as far as possible, each definite set of rules is prefaced by a well-summarized exposition of its higher aspects. Thus, in the case of haymaking, while two sheets were devoted to strictly agricultural matters, so as to satisfy the farmer, a third sheet was devoted to the larger educational aspect of the subject, showing the place of the hay harvest among the labors and festivals of the year. An outline was appended of ancient and modern views of the seasons, astronomic and historic, literary and poetic, thus transcending the practical outlook to take in a long perspective of liberal culture. On inquiry of the boys, as well as of the masters, I satisfied myself that these rules and explanations had been of real interest and service, and were regarded by them as having greatly aided in the admirable function of the previous day, and this in all its aspects, economic and artistic, literary and ethical.

In this way I reached my first appreciation of the school, as successfully progressing toward reuniting two sides of life at present too much divided, and too exclusively assigned to the so-called laboring class and the so-called cultured class respectively. It is from lack—say rather the loss—of this union in our present education that the rustic is left rude, and the scholar left bookish; here plainly was growing up a healthier type than either, because correcting the respective defects by the corresponding qualities of both.

Similarly in other regulations, e. g., those for bathing, for "dormitory parade" (i. e., bed-making, teeth-cleaning, and so forth), for cabinets, etc. The simplest physical pleasure of bath or bathe, nay, even the humblest offices of the body, are thus not only made healthily habitual, but educative in the fullest sense, each being understood progressively from the standpoints of cleanliness and health, of intellectual clearness, of social and moral organization and responsibility.

Those sets of rules which apply at all times are framed and fixed in their appropriate places. Others, such as the bathing rules, after the appropriate season is over, are wisely withdrawn from view to reappear afresh another year. Thus no one can plead ignorance of either the law or its associated doctrine; and there is no doubt that in this way administration becomes not only more easy and effective, but obedience becomes willing and punishment rare.

On the whole, then, despite some minor reserve as to details here and there, which it is quite possible fuller experience might remove, I must confess to having been converted, and this in some measure against my will, to an appreciative and even approving recognition of this highly developed plan of school organization.

The same day I began visiting the lessons given by the different masters. Beginning with the head, I heard a lesson in chemical theory vividly and clearly given. Thence I passed to a study of the outdoor occupations of afternoon school, to which much importance has always been attached at Abbotsholme from the first. Here the master in charge rapidly sent off various squads of boys to work. One large detachment, duly captained, went to clear a pasture of thistles. A small group was told off to attend to the bee-farm; some, to separate honey from the comb; others, to paint a wax-box; and so on. One or two boys had to repair and paint the canoes, while a small batch of youngsters went to their own little gardens. A larger number of juniors remained in the workshop, their work for that hour being to repair the hay-rakes, which, having naturally lost or broken teeth during the harvesting, had of course to be repaired before being laid aside for next season.

I visited the workshop on other days also, and can speak of all I saw in it, of its management and teaching, with eulogium. The work was at once useful and practical, requiring a reasonable measure of skill in both the handiwork and the working drawings, with clearness of head in both. The personal teaching, Socratic and sympathetic, I could not but admire.

At 4 o'clock, the two hours' afternoon school being over, the boys were free for games till 6. As I had examined the buildings the day before, I now went with a fresh boy guide over the whole school estate, when I was struck, on the one hand, by the very fortunate situation of the property, and, on the other hand, as befits such an excellent environment, by the healthy atmosphere and tone of the community itself. But, to assure myself that I had not got into the hands of exceptionally distinguished or specially selected boys, I joined, so far as time allowed, in games and bathing, and so came to make a good many individual acquaintances, as well as to know most by name and sight. The same evening, at evening chapel, the rustic spirit of the preceding day's labor was not lost sight of, Gray's "Elegy" being chosen as the lesson, which was read with sympathy and heard with attention.

After these two days of general inspection, I naturally devoted the rest of my week to a more detailed scrutiny of the teaching.

For this purpose I not only read all the examination papers, but was present at lessons by each of the masters in all the various classes. I also looked through a very large number of boys' notebooks, so as to form an idea of the work of the three terms of the current school year.

Leaving, at present, matters of instruction to the more systematic portion of my report, I may conclude this narrative by noting for special commendation in the afternoon school the open-air sketching classes and the drill. A small detail, but one characteristic of the practical resourcefulness which this school life appears to me peculiarly to develop, I may mention. I noticed that a youngster who had been marching badly was ordered to "fall out and join the small boys," who, some distance off, were being drilled by one of themselves. The youngster in disgrace fell out, looking crestfallen enough. But I was amused, on passing that way a few minutes after, to see that, to hide his own discomfiture, he had taken over the command of the little squad and was drilling it himself!

During my visit I had opportunities for conversation with each of the masters, and especially with the head. With the latter I went over both old and recent buildings, and visited the gardens old and new. I also examined the proposed plans for further extensions, and discussed, as fully as time allowed, the various aspects and needs of the school and its curriculum.

On the Sunday evening I was present in chapel at the headmaster's weekly sermon to the boys, and was again very favorably impressed by the frankness, directness, and intellectual suggestiveness of his teaching, its moral and social value, and therefore strength of influence, and this especially for senior, or at any rate thoughtful, boys. At both week-ends I had been struck by the number of old boys who were revisiting the school, and by the warmth and loyalty of their feelings alike to the place and to its head. Not being unacquainted with the progress and with the difficulties of the school since its foundation, I was gratified to have these best of all assurances, not only of its enduring vitality, but of its accumulating strength. The "Old Boys' Club" will here doubtless serve as a valuable influence, and that increasingly.

To the question of health I paid much attention. Especially notable is the medical organization, which accompanies that minute and thorough organization of hygiene for which the daily school life and the new buildings are so carefully planned. Skilled medical aid is a mile or so away, but first aid of every kind is provided in a well-kept waiting-room and surgery, in which all accidents and ailments have to be regularly reported, and in which all the needful dressings and simple remedies can at once be found, slight cuts and bruises furnishing, of course, the staple cases. Under these circumstances the saying that "nobody is ill at Abbotsholme" seems almost to have passed into a school proverb; and I learned that during fifteen years no serious epidemics have occurred, excepting two outbreaks of measles, each at the beginning of term, and due to the sending of a boy already suffering from the disease. In the only case of dangerous illness (one of appendicitis) prompt treatment was successful.

As an example of the readiness and self-reliance of the young "medical officers" (a prefect, with his understudy, who will be in charge next term), I noted during my stay with interest that a cut deeper than usual had been promptly sewn, with due antiseptic precautions, by the boy-surgeon on duty, without calling in the doctor at all, or even referring the matter, as the rule advises, to the headmaster.

Looking into statistics, I noted that, while the medical diary for the school year now closing included nearly two hundred medical units (that is, visits per boy per day), the slightness of the ailments (mostly cuts, chilblains, colds, etc.) was evidenced by the fact that the total bills from doctor and druggist put together amounted to only about 25*s.*! Of the advantage of the "stitch in time" I can imagine no better evidence.

Next, looking closely at the boys one by one in the classroom or field, I could distinguish only two who showed any physical defect. One boy was evidently suffering from eye-strain; but his spectacles, I found, had only just been broken. The other had overcrowded teeth. As the school rules require the boys to visit dentist and oculist during vacation, any neglect in these matters is due to the parents rather than to the schoolmaster.

Searching more and more closely after the explanation of this notable health and vigor of the boys, I explored the kitchen department, and inquired into the dietary. The food was not only ample and well-cooked, carefully chosen and varied, but skilfully and gracefully served also. The wholesome porridge and milk of the North, the substantial joints of English tradition, and the fruits and salads of the German table were all amply represented; I noticed, in fact—what I should have thought well-nigh impossible to boy nature—that the supply of strawberries at more than one table had been so generous as to outrun the demand. Rich and tasteful decoration gave the final touch of beauty to the spacious and well-lit dining-hall. The regrouping of the boys at the various tables for the three chief meals, so that the same do not sit together, but enjoy daily opportunities of conversation with a succession of boys, as well as masters, ladies, and guests, is again one of those many details in which Abbotsholme improves upon the too fixed monastic or barrack-like tradition of older schools, both in this country and abroad.

The school costume, too, shows the same attention to what is healthy and practical, convenient and becoming; again a notable escape from the archaic or conventional fashions so common in the school world.

Comprehensive and minute attention to hygiene is expressed throughout the buildings, and especially, of course, in the "new wing." Having myself been largely occupied in the building, or transforming, of large houses to be residences for Edinburgh students—a responsibility closely analogous to that incurred in building a public school—I must not only express a general approval of the success of Abbotsholme in these matters, but the warmest particular appreciation of the skill and ingenuity of the plans, whereby attention has been given to every detail of health and sanitation, to every precaution against epidemics and against fire. I have before me two notable recent deliverances of the highest medical authority: (1) Dr. Hutchinson's recent appeal for the teaching of Hygiene in schools, and (2) the important report of Dr. Leslie Mackenzie on the "Health of Schools," prepared for the present Scottish Royal Commission on this subject, and I have pleasure in bearing witness that each writer may find his requirements more fully met at Abbotsholme than anywhere else I know of.

[*To be concluded*]

CHRISTMAS AT THE UNIVERSITY ELEMENTARY SCHOOL

MRS. FRANK HUGH MONTGOMERY
Secretary of the Parents' Association of the School of Education

For many weeks before December 22, when the Christmas festivities were held at the School of Education, the spirit of the day had been growing in the thought and work of the children. The presents for the fathers and mothers were treasured as delightful secrets, and were the objects of much careful, patient, loving work. The thought of giving and sharing did not stop with the home, but reached out in playing Santa Claus to the children at the Home of the Friendless through the bright scrapbooks made by the kindergarten children, to individual families of the destitute, to children's clubs at two of the settlements, and in other ways. Thus the little people were all ready for Christmas Day at the school, and eager to have the parents come and join in the good time.

A most fitting introduction was the morning exercises, to which guests could not be invited on account of lack of room. The earnestness and feeling which the children showed in the singing of the Christmas songs, the attention with which they listened to the reading by Miss Fleming of the first Christmas, and to Mr. Jackman's simple talk about the Christmas message of good-will, which belonged to each and which each could bestow, evinced that the preparation had been a real and a beautiful one. The program in detail was as follows:

Song, "Ye Shepherds, Arise!"................................*Carl Reinecke*
Scripture Reading..*Miss Fleming*

1. Prophecies:

> "How beautiful upon the mountains are the feet of Him that bringeth good tidings, that publisheth peace; that bringeth good tidings of good, that publisheth salvation; that saith unto Zion, Thy God reigneth!"

"For unto us a child is born, for unto us a son is given: and the government shall be upon his shoulder: and his name shall be called Wonderful, Counselor, The Mighty God, the Everlasting Father, the Prince of Peace," etc.

2. The Magnificat } The Nativity } ....St. Luke
3. The Three Wise Men.............................St. Matthew

Christmas sentence, "Glory to God in the Highest"..........*Crosby-Adams*
"Why Do Bells for Christmas Ring?"...........................*F. W. Root*
Address, "The Christmas Message"..........................*Mr. Jackman*
"Now He Who Knows Old Christmas"..................................

From these exercises the children went either to their respective graderooms or to the German play, as the room was not large enough to accommodate all at the same time. Twice the room was thronged with children and guests to see the German play. One of the boys gave a little outline of the play as it had been arranged by the class, and when the screens were withdrawn, the audience murmured a hearty approval of the perfect little forest presented to their gaze. A little glade in the midst of the fir trees weighed down by the new-fallen snow gave space for the players, and the gnomes seemed to appear as if by magic. It was a scene of great simplicity and effectiveness.

DIE TANNENFEE

(Ein Weihnachtsspiel)

PERSONEN

LIESE, GRETEL, MARIE — drei Bauernkinder.
KNARRE, KREISEL, WALDTEUFEL — Kobolde.
RUPRECHT — ein Waldgeist.
DIE TANNENFEE.
Scene: Ein dunkler Tannenwald. Die Erde ist mit Schnee bedeckt.

(Drei Mädchen kommen. Ein Mädchen trägt einen Korb mit Aepfeln. Sie suchen einen Weg.)

LIESE: Ich weiss nicht, wo wir sind, Marie. Da ist wieder der alte Tannenbaum.

MARIE: Ich glaube, da sitzt wieder der alte Kobold hinter dem Baum. Nein, er ist fort.

GRETEL: Nein, da ist der Kobold wieder; ich habe ihn gesehen

Liese: Kommt, lasst uns fort gehen; mir ist bange.

Marie: Ja, lasst uns eilen; es ist so dunkel hier.

Gretel: Lauft, lauft! Ich sehe wieder einen Kobold.

(Die Mädchen gehen schnell fort, Drei Kobolde springen auf die Bühne. Dann kommt Ruprecht.)

Kreisel: Herum, herum, immer im Kreise herum! Wo sind die Mädchen?

Knarre: Knarr, knarr, wo sind die Kinder?

Waldteufel: Brumm, brumm, wo sind sie?

Kreisel: Heisa, heisa, dideldumdei! Ich suche die Mädchen; sie sollen das Weihnachts fest nicht feiern.

Knarre: Heute ist Weihnachten und das ist ärgerlich für einen Kobold. Ich will die Kinder necken und erschrecken.

Waldteufel: Ich will brummen, tief und laut, dass sie sich fürchten.

Alle drei: Heissa, holla, kommt, lasst uns gehen.

(Ruprecht kommt mit einem Besen.)

Ruprecht: Recht so, recht so, meine lieben kleinen Waldgesellen! Führt die Kinder in die Irre. Kreisel, hüpfe und tanze! Knarre, schnurre und knarre! Teuflein, schnarre und brumme! Die Kinder sind dort auf dem Weg. Folgt mir, wir wollen sie erschrecken, damit sie den Weg nach Hause nicht finden.

(Die Gnomen gehen ab. Man hört die Kobolde lärmen und die Kinder schreien.)

Liese: Lauft, lauft! Die Kobolde holen uns ein.

Gretel: Hört, wie sie brummen und schrei'n.

Marie: Und die Nacht ist so dunkel; es ist kein Stern am Himmel.

Ruprecht *(zu Liese)*: Halt, nicht weiter!

Kreisel *(zu Gretel)*: Steh still, du dummes Ding!

Knarre *(zu Marie)*: Du musst hier bleiben.

(Die Kobolde und Ruprecht schliessen einen Kreis um die Kinder.)

Kobolde: Kommt, lasst uns tanzen!

Liese: Fort mit euch, ihr Kobolde!

Ruprecht: Still! Willst du meinen Besen fühlen?

Marie: Was sollen wir tun?

LIESE: Wir wollen beten. *(Die Kinder knien nieder.)* Ach, lieber Gott im Himmel, hilf uns armen Kindern!

(Die Kobolde verschwinden.)

LIESE: O Gretel, die Kobolde sind weg.

MARIE: Wo, sind sie geblieben?

GRETEL: Gott hat uns geholfen. Aber ich kann nicht mehr gehen, ich bin zu müde.

MARIE: Und der Kopf tut mir weh. Lasst uns hier bleiben bis morgen früh.

LIESE: Aber Vater und Mutter wissen nicht, wo wir sind, und wir haben doch die Aepfel für das kranke Brüderchen.

GRETEL: Ach, Liese, die Aepfel duften so süss.

MARIE: Lass mich die Aepfel nur einmal sehen.

(Liese öffnet den Korb.)

LIESE: Ja, schau nur, wie rosig sie sind.

MARIE: Sieh, was für schöne rote Backen dieser Aepfel hat.

GRETEL: O, und dieser, wie gut er schmecken würde.

LIESE: Aber wir dürfen doch die Aepfel nicht essen. Ich will den Korb zumachen.

GRETEL: Aber einen Aepfel können wir doch essen, nur einen.

MARIE: Ach, ja, Liese, einen Aepfel nur. Reich mir den Korb, bitte!

GRETEL: Beiss' einmal in diesen Aepfel, Liese!

LIESE: Nein, Gretel, ich will mein Versprechen nicht brechen.

MARIE: Und ich auch nicht. Wirf den Aepfel in den Korb, Gretel!

GRETEL: Aber mich hungert so.

LIESE: Kommt, lasst uns ein Wiehnachtslied singen; das wird den Hunger vertreiben.

DIE KINDER *(singen)*: "Stille Nacht, heilige Nacht."

(Sie schlafen ein.)

TANNENFEE: Schlaft ohne Sorgen; die Tannenfee wird euch beschützen.

LIESE: Was sehe ich?

GRETEL: Wovon träume ich?

MARIE: Wer bist du?

TANNENFEE: Ich bin die Tannenfee. Der immergrüne

Tannenwald ist meine Wohnung. Ich bin hier, wenn der Kuckuck ruft und die Sonne lacht, wenn der tiefe Schnee auf den Bäumen liegt und im Mondenschein glitzert.

(Sie verschwindet. Die Kobolde kommen.)

Ruprecht: Schämt euch, ihr dummen Kobolde! Ein Kinderwort hat euch fortgetrieben.

Kreisel: Ha, ha, ha, du bist schnell genug mitgelaufen.

Knarre: Heissa, da liegen die Kinder.

Waldteufel: Kommt, wir wollen sie necken.

Kreisel: Ich will sie am Armel zupfen.

Knarre: Ich will sie an den Haaren ziehen.

Waldteufel: Und ich will ihnen die Aepfel fortnehmen. Komm' Ruprecht, tu' auch mit.

Ruprecht: Ich weiss nicht, wie mir zu Mute ist. Die Kinder schlafen so schön, ich kann sie nicht necken.

(Die Tannenfee kommt.)

Kobolde: O weh, o weh, die Tannenfee!

Kinder: Die Tannenfee!

Tannenfee: Ja, ich bin die Tannenfee, und ich will euch helfen, denn ihr seid bräve Kinder. Aber euch Kobolde will ich bestrafen; ihr sollt jetzt alle stumm sein.

Tannenfee: Du, Kreisel, sollst jetzt immer für Kinder springen. Du, Knarre, sollst jetzt immer für Kinder knarren. Du, Waldteufel, sollst jetzt immer für Kinder brummen. Du aber, Ruprecht, du hast ein gutes Herz, du sollst Christkindleins Knecht werden. Du sollst den Kindern zu Weihnachten Spielzeug und Aepfel bringen, wenn sie brav sind, aber du bringst ihnen die Rute, wenn sie unartig sind. Jetzt geh' in den Wald und suche den schönsten Tannenbaum, welchen du finden kannst. Komm', Ruprecht, mach' schnell! Hol' den Sack da, Ruprecht! Lass die Kinder hinein sehen.

Liese: O, die wunderschöne Puppe!

Gretel: O, der grosse Ball!

Marie: O die vielen, vielen Kuchen!

Tannenfee: Gieb' jedem Kind ein Spielzeug.

Kinder: Danke, danke sehr, lieber Ruprecht!

Tannenfee: Nun, schmücke den Baum, Ruprecht, und

dann bring' die Kinder nach Hause. Ihr aber, Kinder, singt mir ein Weihnachtslied.

KINDER *(singen)*: "O Tannenbaum." *(Die Tannenfee verschwindet.)*

RUPRECHT: Kommt, Kinder, wir gehen nach Hause.

KINDER: Wir gehen nach Hause, nach Hause!

During the middle of the forenoon there were four combinations of groups. The French carolers visited each in turn. The first and eighth grades met in the kindergarten room, the little tots having had their celebration the day before. Games were played in which the big children showed a nice spirit and a sympathetic feeling toward their young partners. The first grade gave a dramatized version of "The Night Before Christmas." There were the father, the mother, and three children, the reindeer with fierce horns on their foreheads, and a fat little Santa Claus who could not reach the stockings, as they hung in front of the high chimney. The eighth grade contributed these two original verses:

CHRISTMAS

Christmas time is coming,
  When all the world is gay;
Christmas bells are ringing,
  And Santa's on his way.

Stockings full of presents,
  Hanging, bulging out.
All the world is pleasant
  When Santa's round about.

Lovely Christmas evergreens,
  Decked with sparkles bright;
Little Christmas angels,
  And candles flickering light.

Now the presents given;
  Santa goes away,
Wishing to the children
  A merry Christmas Day.

The air is clear,
And Christmas is here,
  And the cold north wind is blowing.
Holly wreaths green
In the windows are seen;
  In the house the Christmas tree's glowing.

Church bells are ringing,
And children are singing,
  Chanting their songs of praise.
Hurrah for old Christmas
And the good things it brings us!
  Hurrah for the holidays!

Santa is here
With his swift reindeer
  And a pack full of beautiful toys.
Down the chimney he comes,
With dolls and with drums
  For good little girls and boys.

The second, fourth, and sixth grades had a happy time with games, songs, and a piano selection by one of the children. The story of St. Christopher was told, and refreshments were served, the cookies having been made from flour ground by the children themselves.

The third grade and one division of the seventh began their festivities with a German song—"Kling, Glöcklein, kling," by Reinecke. The older children recited Christmas poetry. The group was visited by the French carolers and English waites. They went to the German play together and returned. The third grade recited "The Night Before Christmas." One of the seventh-grade boys, in the guise of Father Christmas, distributed stockings filled with candy, salted peanuts, and popcorn. The younger children had made the stockings and prepared the peanuts and the popcorn, whereas the candy represented the work of the seventh-grade children.

The meeting of the fifth and seventh grades was an exchange of gifts. The fifth had candy which they had made for their seventh-grade friends and the seventh had presents for the fifth. Songs were sung, but the chief entertainment was the reading by one of the college students of "The Ruggles' Christmas Dinner," from the *Bird's Christmas Carol.*

To the eighth grade belonged the yule-log festivities, which will be described later.

But the march of the French carolers must be followed as they passed from group to group. One of the children first gave the following account of *noël* in France:

NOËL

In France, especially on the south, Christmas is a more religious festival than with us. It is the time of almsgiving, but the chief gift season with the French is New Year's Day. Many of the beautiful old-fashioned customs still existing in the south have died away in the north and in cities under the influence of commerce and foreign peoples.

The ceremonies connected with Christmas have always been filled with joy, and this gaiety finds expression in ways more or less unique. The people have always sung carols, songs in genuine patois, or even the older Low Latin, which possesses remarkable simplicity and naïveté. The formal poetic value of these carols is almost nothing; they are as rustic as the peasants who are supposed to sing them.

In the south, particularly, the festival of Christmas is a time of some quite special manifestations which recall singularly certain pagan customs. On Christmas eve the festival is opened by a great supper. The table is set before the fire, where burns, crowned with laurels, an old yule-log, dried and kept with affectionate care for this triple solemnity of the Christmas-tide. Just before seating themselves at the table, the family makes an offering to the fire—a habit that savors of old-time idolatry. Only the sweet innocence of a very young child is considered worthy to utter the prayer and present the offering to the fire. The youngest child, therefore, kneels before the hearth, now for the time an altar, and prays, following the mother's words, that the fire will warm well during the long winter the tender feet of all young orphans and weak old people; that it will send its light and heat into all poor garrets; that it will not devour the laborer's thatch nor the boat which rocks the sailor on distant seas. Then he pours upon the fire a libation of cooked wine as a symbol of life and health; and the old olive trunk answers with joyous cracklings and hissings, and sends its fumes out into the eager air like messengers of the *spirit of good-will to all men.*

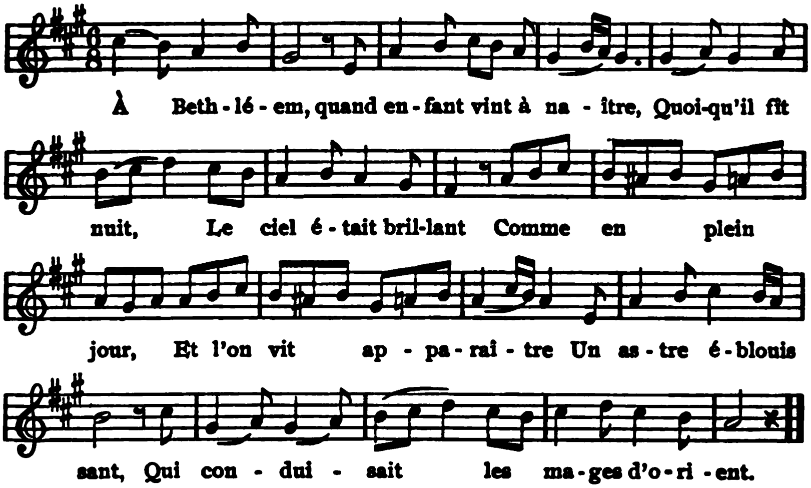
At this moment a bell is heard outside, announcing our Lady of the Christmas. She enters, clad and veiled in white, and accompanied by carolers who sing a joyous canticle of the season. The guests are asked to share in the feast, especially in the Christmas cake, which has received the cook's very best care and which has the place of honor in the feast. The guests then pass on to other homes, and after the supper is over, the family gathers once more around the fire. There they sing carols till midnight, when they all go to the church to hear early mass.

During the whole of this night the poor are allowed to beg publicly, while chanting their carols. From the windows the children throw alms to them in little bags, which are set ablaze at one end, that they may be seen when they fall. They are like falling stars of heaven.

As the pupil finished, a woman in a bright peasant costume was seen seated by the fireside. Her child knelt beside her and repeated the Christmas prayer for all the orphaned and fatherless, for the aged and infirm, for all in peril by land or sea, and begged for them the Christmas blessing. Music was heard without.

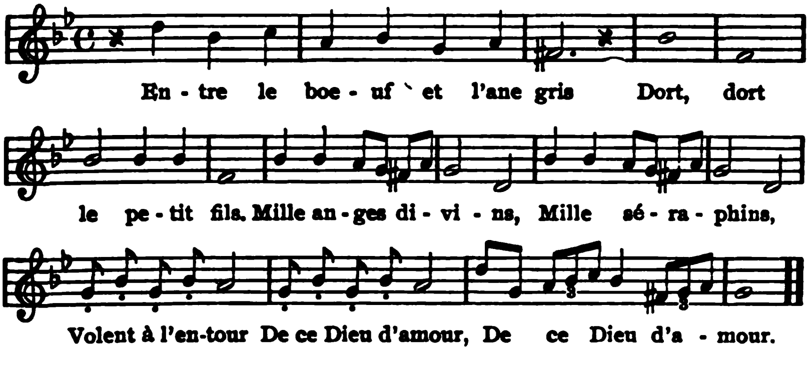
The door was opened. First entered the Christmas spirit — a little child clad in white and veiled. Next marched, as in older times, three who represented Europe, Asia, and Africa, in costumes which the children considered appropriate. In gorgeous yellow, with golden miters, came the high prelates of the church; for the church must be first. These garments were the children's hand-work. Then followed the shepherds; and next came the peasants, bearing candles and joining in the procession. The

À BETHLÉEM


À Beth-lé-em, quand en-fant vint à na-ître, Quoi-qu'il fît
nuit, Le ciel é-tait bril-lant Comme en plein
jour, Et l'on vit ap-pa-raî-tre Un as-tre é-blouis
sant, Qui con-dui-sait les ma-ges d'o-ri-ent.

guests were treated to the Christmas cake, which had been most carefully prepared. They joined in a hymn about the hearthstone, and passed on their way to gladden and receive from other homes.

ENTRE LE BŒUF ET L'ÂNE GRIS


En-tre le boe-uf ` et l'ane gris Dort, dort
le pe-tit fils. Mille an-ges di-vi-ns, Mille sé-ra-phins,
Volent à l'en-tour De ce Dieu d'amour, De ce Dieu d'a-mour.

All the morning the hand-work done by the pupils throughout the quarter was on exhibition in the art, textile, and lunch-rooms. It presented a great variety and showed the individual tastes of the children. Of course, much of it centered about the Christmas work, as gifts for the parents. The kindergarten had as a group made thirteen scrapbooks and a number of colored clay-balls, and individually had made napkin-rings, tea-rests, penwipers, match-scratchers, blotters with calendars pasted on, and scrap-books of madonna pictures. The older children made these last two in larger sizes, and the average number of articles made by the younger pupils was four; of the older, six.

The work of the children beyond the kindergarten, was even more varied. The clay-modeling was of necessity confined to two grades for the autumn quarter. These were the third and the fourth. They made jars, candlesticks, pin-trays, bowls, tiles, vases, statues, inkstands, dishes, collar-button trays, match-boxes, a Dutch shoe, and a squirrel. Each child chose his coloring, and in short did all the work except the actual firing. The results of their labors were good in form and color, and often a thing of beauty as well as utility. The ingenuities of the third-grade children, however, were not confined to clay. They found expression in more than creditable articles, such as portfolios, handkerchief holders, a chair picture-frame, ash-tray, needle- and spool-holder, needle-case, paper- and envelope-holders, and hat- and hairpin-holders, all of which testified to a close connection between the school and the home in the thought of the child. The work which the fourth-grade children did in wood showed that they loved their work and found it an interesting and adequate mode of expression. The polished fern-stands of hard wood, and many another piece fashioned with loving care, bore evidence of good work on the part of both pupil and teacher.

With the fifth grade a more pronounced difference between the tastes of boys and girls appeared, for some reason or other, although there were overlappings which would eliminate any hard and fast lines. A doll's chair and bed were in close proximity to an electric switch and a bread-board. Handbags of linen with decorations of original designs, turn-over collars, and center-pieces, were testimonials to the neat sewing of the girls. A pin-tray and a table stood in antithesis, both good. Fern- and music-stands, book-racks, waste-baskets, ink-stands, blotters, paper-knives, footstools, picture-frame, and card-trays again betokened individuality.

Difference in material was a feature of the sixth-grade

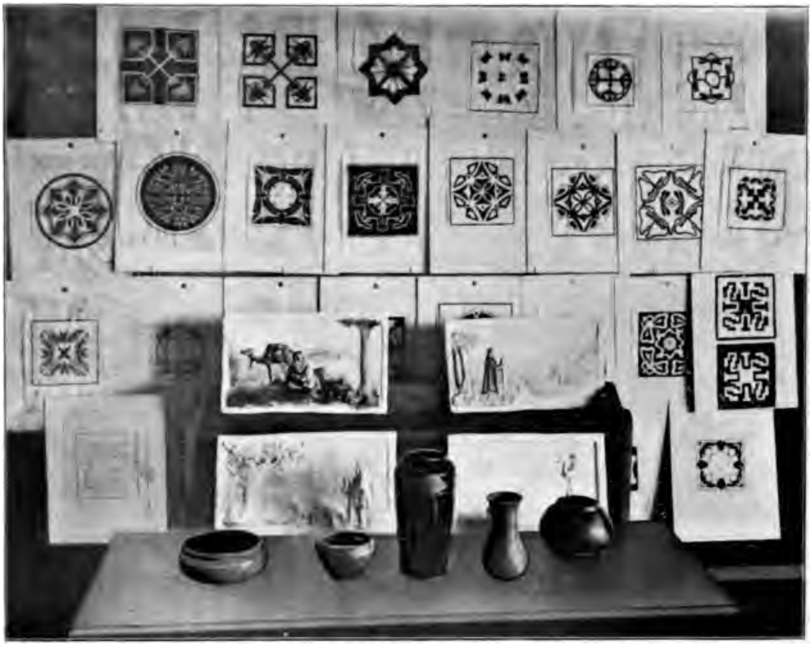


FIG. 1.— Work in Pottery and Plaster and Designs in Color. College and Elementary School.

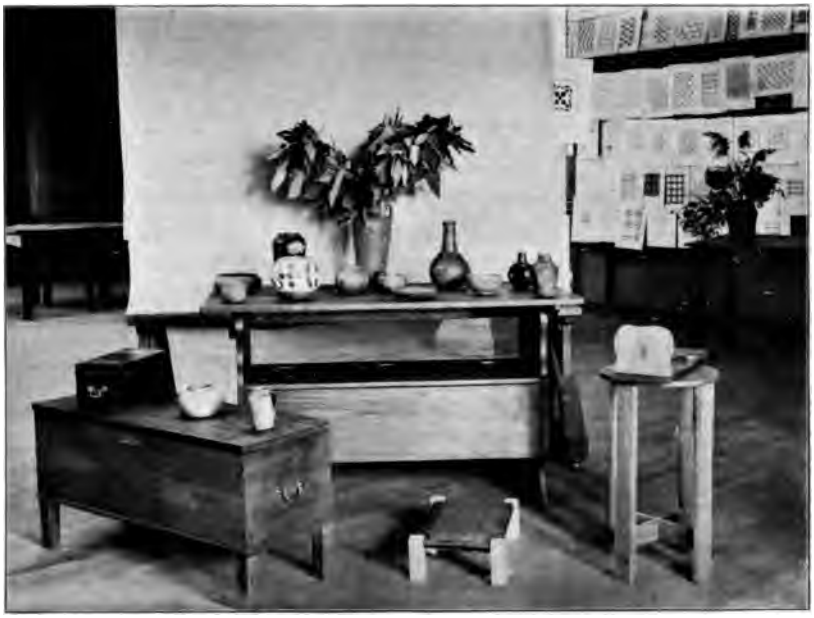


FIG. 2.— Clay and Wood Work. College and Elementary School.

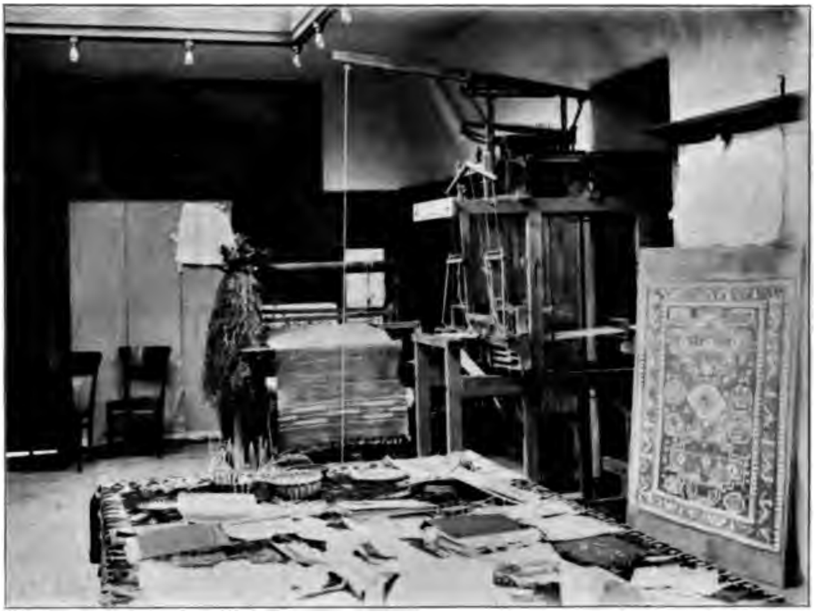


FIG. 3.— Work in Textiles. College and Elementary School.

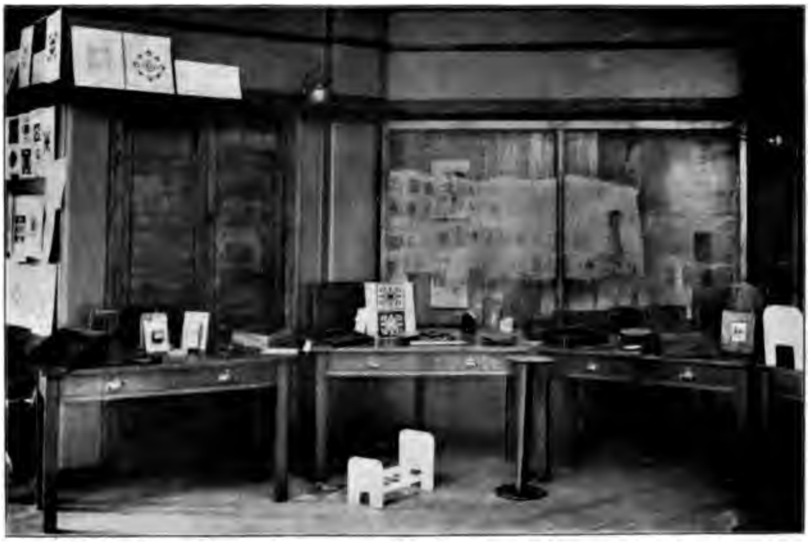


FIG 4.— Work in Design and in Wood. Elementary School.

manual training: articles in gum wood, mahogany, pine, and oak, on the one hand, and linen and leather table and tabouret covers, lamp mats, doilies, and centerpieces, on the other. As small a thing as a penholder, and as large a one as a window-box, received the same care. An oak plank for fish and a rocking-chair vied with each other in homelikeness, while many of the articles enumerated in the other grades had a showing.

With the seventh grade the work naturally showed more skill and ability. The girls tried their hands at sewing aprons and lace-trimmed handkerchiefs, pin-cushions, and bags. There were the same articles in wood, while a tea-table, letter-box, and stamp-box lent additional variety.

In the portion devoted to the eighth grade the sewing on aprons, underclothes, bags, and scarfs stood in even stronger contrast to the tables, picture-frames, stools, inkstands, pen-trays, and plate- and bookracks of the sloyd-room.

It is impossible to enumerate all the hand-work of the exhibit. The accompanying illustrations will give a fair idea of portions of it. The work was certainly very creditable, and the results of the advantages of hand-training self-evident. The most skeptical critic of this phase of modern elementary education would have been quite converted.

The concluding festivities of the day were in the hands of the eighth grade. Throughout the building they had spread the Christmas decorations, with emphasis on the entrance hall. Down the corridors, from east to west, toward this point came groups, resplendent in color, all who had worn costumes in the various exercises of the day — French peasants, German children, the high prelates of the church of the Middle Ages, and the gnomes of the forest. They, together with many guests, gathered about the hearthstone. Then up rose a lad who cried:

England was merry England when
Old Christmas brought his sports again.
'Twas Christmas broached the mightiest ale;
'Twas Christmas told the merriest tale.
A Christmas carol oft could cheer
The poor man's heart through half the year.
On Christmas Eve the bells were rung;

On Christmas Eve the mass was sung —
That only night in all the year
Saw the stoled priest the chalice rear.
The damsel donned her kirtle sheen;
The hall was dressed in holly green;
Forth to the wood did merry men go
To gather in the mistletoe;
Then opened wide the baron's hall
To vassal, tenant, serf and all.
Power laid his rod of rule aside,
And ceremony doffed his pride.
The heir, with roses in his shoes,
That night might village partner choose;
The lord, underogating, share
The vulgar game of "Post and pair."
All hailed with uncontrolled delight
And general voice the happy night,
That to the cottage, as the crown,
Brought tidings of salvation down.

—*Sir Walter Scott.*

As he finished speaking, the host and hostess of the yule-log festivities entered. Following them strode the butler, with all-important air, bearing the hot drinks. Into the wassail bowl, trimmed with holly and ivy, upon the roasted apples, was poured the steaming cider, made fragrant with spices. Then arrived the guests, with cordial greetings from host and hostess, and were treated to cakes and cider. The host then cried:

Come, bring with a noise,
My merry, merry boys,
  The Christmas log to the firing,
While my good dame, she
Bids ye all be free,
  And drink to your heart's desiring.

Whereupon entered the servants bearing the yule-log, which was lighted with last year's brand to the words:

With the last year's brand
Light the new block, and
  For good success in his spending,
On your psalteries play,
That sweet luck may
  Come while the log is a-tending.

The hostess heaped on more wood, saying:

Heap on more wood! — the wind is chill;
But let it whistle as it will,
We'll keep our Christmas merry still.
Each age has deem'd the new-born year
The fittest time for festal cheer;
Even, heathen yet, the savage Dane
At Iol more deep the mead did drain;
High on his beach his galleys drew,
And feasted all his pirate crew.

She then treated the servants to a drink from the Christmas bowl, and had barely finished when the waites came caroling: "God rest ye, merry gentlemen!" As they finished, they stood back to admit Father Christmas, clad in a long, flowing gown of beautiful green and ermine. All joined in singing, "Now he who knows old Christmas." The host greeted Father Christmas who threw favors from his sack to the guests. Three boys then recited:

OLD CHRISTMAS RETURNED

All you that to feasting and mirth are inclined,
Come, here is good news for to pleasure your mind,
Old Christmas is come to keep open house,
He scorns to be guilty of starving a mouse:
Then come, boys, and welcome for diet the chief,
Plum-pudding, goose, capon, minced pies, and roast beef.

The holly and ivy about the walls wind
And show that we ought to our neighbors be kind,
Inviting each other for pastime and sport,
And where we best fare, there we most do resort;
We fail not of victuals, and that of the chief,
Plum-pudding, goose, capon, minced pies, and roast beef.

All travelers, as they do pass on their way,
At gentlemen's halls are invited to stay,
Themselves to refresh, and their horses to rest,
Since that he must be old Christmas' guest;
Nay, the poor shall not want, but have for relief,
Plum-pudding, goose, capon, minced pies, and roast beef.

— *Old Carol.*

And all were bidden to dinner.

So ended a happy day of revels, in which the Christmas spirit loomed large and sweet, and the parents went home to wish that they had lived in the school days of the present instead of those of long ago. By dividing the school into groups of older and younger children, and by moving from place to place, the exercises had a simplicity and a freedom from that stiffness and striving for effect which render harmful many "closing exercises." The sweetness and thoughtfulness of the older chlidren toward the younger, the absence of the "I am bigger and wiser than you" atmosphere, and the lack of self-consciousness on the part of those who contributed to the entertainment were most noticeable. Above all shone out the spirit of good-will and of helpfulness. The German play was given twice, and the French carolers went to four different places, showing the same interest and earnestness the last even as the first time.

GENETIC PSYCHOLOGY THE BASIS OF A NEW EDUCATION

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A well-known German educator, speaking recently in high terms of American contributions to educational theory and practice, regretted that it consisted of fragmentary, isolated, and often unsystematic studies. "There is one man in America," said he, "who could organize this material; and that man is G. Stanley Hall."

Adolescence is Dr. Hall's reply to the wish of his German friend. But is it a systematic treatise? Would Dr. Hall attempt to organize his material, if he could? In the light of his expressed scorn for the "cartographer and tabulator of the fields of knowledge," we are inclined to think not. The book is in perfect accord with Dr. Hall's usual method. A wealth of material drawn from child-study, anthropology, criminology, physiology, sociology, and numerous other "ologies" has been worked over, digested, and — sifted. There we are not so certain. One is amazed at the extent of knowledge in all fields, at the audacity and suggestiveness of the ideas and theories presented; but they are hurled at us with little regard to system. Many of these studies were made by students of Dr. Hall, and consequently reflect his own preconceptions. He is the blazer of a new trail in psychology; too much of a genius to be disturbed by lack of method, content, we may well believe, to allow someone of less original power and insight the privilege of working over his contributions into more systematic form. The first discoverer of a new land is never able to give us a complete map of the country. Just as little ought we to expect a thoroughly organized and balanced treatise from one who has made extended original contributions to a science. Nevertheless, there is a unifying idea, a thread of continuity running through the entire book. We have the outlines of a new psychology and a new education.

While the theory of psychogenesis presented in the book is meant to serve as a basis for a new education, it is the portion which is by far the most clearly defined and most originally conceived. "The new psychology," lately the name used to designate the experimentalist school, receives another connotation when applied to Dr. Hall's theory. He departs radically from orthodox psychology, first in point of view, secondly in method, thirdly in the material which he admits as data, and finally, and necessarily, in his conclusions.

The point of view is that of genesis. But "genesis" is here used in a larger than its accustomed significance. It is not restricted, as in most genetic psychology, to an order of the development of an individual mind. Still less does it harmonize with those epistemological pseudo-genetic accounts of mind which admit the adult consciousness as their only data and find their method in speculation and introspection. "Mind is almost coextensive with life—at least, animal life." With such a view of mind, its genesis is naturally presented in biological and evolutionary terms. Dr. Hall says in his preface that "the genetic ideas of the soul which pervade this book are new both in matter and method. If they are true, they mark an extension of evolution into the psychic field of the utmost importance." While agreeing in general with the author that his view-point is original, we must, however, take exception to the calm way in which he ignores the contributions of the English school of evolutionists to a biological psychology. We are certainly not obliged to revert to the time of Aristotle, as he intimates, to find a psychology based upon biology. Had Darwin, Spencer, and Romanes not prepared the way, it is doubtful whether we should have been favored with Dr. Hall's illuminating treatment of a biological psychology. The oversight can be explained only on the ground of excess of enthusiasm for his own presentation of the subject.

The chief articles in Dr. Hall's creed—his attitude is rather that of a man who presents a creed than of one who presents a theory — sifted and selected seem to be:

1. "There are as many types of mind as of body, and *vice versa,* and we can truly know soul only through body, and conversely can know body only through soul." As a corollary to the above would follow a statement, often reiterated, that "much, if not most, soul is lost. With extinction of every animal type a soul-type vanishes from the world."

2. "Each character-type is thus a fulfilled possibility of development in some specific direction, and in man is based on unconscious, instinctive, prehuman, or animal traits, the elements of which are combined into aggregates of greater or less cohesion according to age or persistence in time." He speaks here of a "general psychonomic law which assumes that we are influenced in our deeper, more temperamental dispositions by the life-habits and codes of conduct of we know not what unnumbered hosts of ancestors, which, like a cloud of witnesses, are present throughout our lives." This may be called a statement of the recapitulation theory, if you will, but it is expressed in general terms. There are no passages in the book which uphold the view of a direct, unvarying parallelism between ontogenetic and phylogenetic development. Direct parallelism is the objectionable feature in the usual statement of a recapitulation theory. No one who accepts the theory of evolution can object to Dr. Hall's formulation of the theory of recapitulation.

3. "As physical nature could hardly be really taught before the development hypothesis, so psychic natures, now so misrepresented, cannot be properly taught, or will at least then be far more effectively taught, and not only without the present mental wreckage, but with vast moral and intellectual economies." Genetic psychology is to be the handmaid of education.

The method.— Dr. Hall has been severely criticised for his large use of the questionnaire method. In *Adolescence* he turns the tables upon his critics, attacking the method of introspection on the ground of its inadequacy. The mental processes of the child, the animal, and the savage — all rich mines for the genetic psychologist — cannot be studied by the method of introspection.

The mind of primitive man, now extinct, can be known only through the interpretation of the relics he has left. "The conscious adult person is not a monad reflecting the universe, but a fragment broken off and detached from the great world of soul . . . . well fitted to illustrate some aspects, and hopelessly unable to exemplify or even know other regions in the cosmos of soul." But introspection can take us no farther than the conscious mental processes of the individual adult. The present attentive state, flitting though intense, does not inform us of the past history of even the individual mind, for much that was once present to consciousness has now lapsed, and can be known and studied, according to Dr. Hall, only in its effects upon the organism which appear in "motor responses" and "subconscious psychoses." In conclusion he states that "we must collect states of mind, sentiments, phenomena long since elapsed, psychic facts that appear faintly and perhaps but once in a lifetime, and that in only a few and rare individuals; impulses that, it may be, never anywhere rise above the threshold, but manifest themselves in automatisms, acts, behavior, things neglected."

While we do not deny the value of these materials, the method has not yet been devised which can be trusted to give us a true report upon them. Questionnaires, multiplied observations, must rest upon a securer basis, if inductions from them are to be accepted as trustworthy. Dr. Hall recognizes the fact that much of this collected material is in a crude and unorganized state; that some of it is worthless. But he claims most justly that this is necessary in a new science. He does not, however, notice the difficulty which every conservative student of mind will see at once — that data of this nature may be easily juggled with. Like statistics, they may be made to prove any theory which one wishes to read into them. The method advocated by Dr. Hall will not be largely adopted, we hope, until it has evolved a check by which to test and verify its results. Otherwise we shall be led into the wildest romances upon mental life and behavior. Much that Dr. Hall has given us in these volumes will be relegated by the majority of psychologists to the field of psychological romance. Much of it must certainly remain unproven; although the illumination which it throws upon mental phenomena may at least be accepted as a provisional argument for its truth. In time these theories of President Hall may be considered as necessary to the explanation of mind as the theory of ether to the interpretation of certain facts in the physical world.

Yet what Dr. Hall can do with impunity because of his mental grasp and clear insight, every tyro will consider his right and privilege. Where, then, shall we end? The careful psychologist may well exclaim before the possibility of a universal application of this method: "Give us pause!"

The field of genetic psychology, as Dr. Hall views it, is wide. (1) It builds upon anthropology, studying not only the races that have disappeared, but those that are vanishing. He desires to get something like a composite picture of racial development, and thus see mind in its stages of evolution. While he holds that the child and the race are the key to each other, he still recognizes the limitations of the recapitulation theory. (2) It includes the study of defectives. By the process of devolution the more complex processes are the first to disappear, leaving the earlier forms intact. We thus get a picture of psychical evolution in its inverse order. (3) It includes animal psychology. Here careful observation is needed, lest we read into the activities of the lower animals mental processes that are not present. "We shall never truly know ourselves till we know the mind of animals, especially those in our own line of descent," says Hall. This field has been largely worked in the last few years. Modern empirical psychology seems disposed to admit reliable data from animal psychology as explanatory of the development of the individual mind. (4) The most numerous studies in genetic psychology belong to the department of child-study. Even those who have decried child-study most must confess that, when the crude materials have been organized, when the careless and untruthful observations have been weeded out, there still remains a residuum extremely rich in suggestions as to the process of mental evolution, and of great practical value in pointing out effective methods in education. *Adolescence* is a proof of the value of child-study.

Conclusions.— Hall makes out three main stages in the development of the individual mind. The first is that of early infancy. He touches lightly upon it, as it bears only indirectly upon the main problem of adolescence. Now the child gets his fundamental psychophysical endowment. Our earliest ancestors, in their experiences with light and darkness, cold and heat, sun and storm, in their struggle with wild animals, have shaped the rhythm of life and bestowed upon their offspring their basal mental attitudes. "The feeling-instincts are the bearers of mental heredity." Here "we have to deal with the archæology of mind, with zones or strata which precede consciousness as we know it. . . . . These radicals of man's psychic life, while some of them are decadent, rudimentary, and superseded, are often important just in proportion to the depth of the phylogenetic strata into which they strike their roots. Hunger, love, pride, and many other instinctive feelings, to say nothing of pleasure and pain, can be traced far down through the scale of vertebrate and invertebrate life."

Feeling and sensation are confused in this nebulous period of the mind's unfolding, as they sometimes are in the nomenclature of certain psychologists. Mental life centers chiefly about the metabolic and nutritive functions of the body. "The true beginning for a psychology essentially genetic is hunger, the first sentient expression of the will to live." Touch might be called a primitive sensation, since all other senses arose by gradual differentiation from it. Smell was one of the earliest senses to be differentiated from general sensibility. It appears early in infancy, and there undoubtedly plays its original rôle, that is, as an aid to prehension. It becomes less and less important as life advances. Hearing and vision as organs of the mind become progressively finer and better adapted to their functions, up to the period of complete maturity.

The most original contribution in the book is the explanation of what is generally known as the drill period, roughly marked off by the years from eight to twelve. The child is less liable to disease, grows more slowly, and seems mentally and physically to have reached a time of greater stability, in marked contrast to the instability of the periods preceding and following. To quote Dr. Hall:

> Everything, in short, suggests the culmination of one stage of life, as if it thus represented what was once and for a very protracted and relatively stationary period the age of maturity in some remote, perhaps pygmoid, stage of human evolution, when in a warm climate the young of our species once shifted for themselves independently of further parental aid. The qualities now developed are phyletically vastly older than all the neo-atavistic traits of body and soul, later to be superposed like a new and higher story built onto our primal nature. The momentum of the paleo-psychic traits is great, and they are often clearly distinguishable from those to be later added. . . . . Indeed, there are a few indications of a yet earlier age nodality or meristic segmentation, as if amid the increased instabilities of health at the age of about six we could still detect the ripple-marks of an ancient pubic beach now shifted high above the tides of a receding shore line, as human infancy has been prolonged.

However we may regard Dr. Hall's theory, every observant teacher and parent recognizes these changes in child-nature. The genetic psychologist has heretofore been content to describe these periods of development. Dr. Hall is the first to attempt an explanation in other terms than the parallels of bodily changes.

Adolescence is the new and higher story added by development.

> Development is now less gradual and more saltatory — suggestive of some ancient period of storm and stress, when old moorings were broken and a higher level attained. . . . . The cohesions between the elements of personality are loosened by the disparities of both somatic and psychic development, and if there is a rest at any stage or in any part before the higher unity is achieved, there is almost sure to be degeneration on a lower level than before. . . . . Early adolescence is thus the infancy of man's higher nature, when he receives from the great All-mother his last capital of energy and evolutionary momentum.

There is a parallel development of the nervous system along the cord, basal ganglia, cerebellum, and cerebrum which would give us the complete picture of mental evolution, if we could interpret it correctly. In the earlier stages sense-stimuli tend to pass over into reflex action; with the dawn of adolescence there is an increase in the number and complexity of associations, so that stimuli pass by the long circuit route, giving rise to deliberative action.

Dr. Hall pays slight heed to the dictum of the psychologist that there can be no psychology of the unconscious. All the fundamental activities are on this level; in fact, most of the activities of the soul do not give rise to consciousness, a phenomenon which represents but one type of mind, a late and partial development. In his outline of psychogenesis Dr. Hall is obliged to introduce a psychology of the unconscious to make his theory consistent; yet it is not necessary that it play so much of a part even in his theory.

We have attempted to give in brief the chief characteristics of Dr. Hall's theory of psychic evolution. But psychology is not to be studied for itself; it is not to be regarded as a pure science. Education is man's chief problem, and genetic psychology is the guide-post which points the way.

While the different features of the new education have not been clearly defined, the suggestions as to general and special method scattered throughout the book are perfectly consistent with the psychological presuppositions. In general, before the value of subject-matter or method can be decided upon, we must determine what instincts are desirable either for their own sake or for where they lead, and what are undesirable and to be checked and left to "progressive atrophy." This would lead to nothing particularly novel or revolutionary in school practice. Since school systems have existed, educational thinkers have asked themselves the question: What instincts shall we foster and what frown upon? answering it, to be sure, in various ways, yet recognizing the necessity of first determining this problem before sketching a system of education.

Next comes the study of the individual child, his possibilities and budding talents. Perhaps Dr. Hall lays unusual emphasis upon the needs of the individual child. It would certainly be desirable if the school could more often take the individual into consideration rather than the class.

Having determined upon our ends in the light of the child's past and his future, it then remains to be determined what mental pabulum will further this end, and in what manner it can be most economically and effectively presented. Dr. Hall recommends in brief and general terms a course of study which has already been worked out in a few schools. Dr. Dopp in her "Industrial and Social History" series is presenting the material so that it can be utilized in the ordinary school. Her books are a practical application of Dr. Hall's theory of psychogenesis. Why all this emphasis upon primitive life? Is it not wasteful? Is it desirable? Dr. Hall has met some of the objections which we might naturally expect to arise. "We shall save the child from the omnipresent dangers of precocity." We may thus also foster the impulses through which the child will be able to realize his complete inheritance and "make it possible to utilize for further psychic growth the results of the higher heredity which are the most precious and potential things on earth. There are other arguments which Dr. Hall might well have used; one is especially important. The modern child is born into a very complex society — too complex to be understood even in mature life. Yet a clearer insight into the meaning and possibilities of this society may be gained through the study of the simpler forms, with their gradual development into the more complex. We are inclined to believe that this material, rightly presented, furnishes us with the most economical means of fitting the child to become an efficient member of modern society.

Dr. Hall does not overlook the necessity of formal work or of drill methods. He says:

> Even if it be prematurely [the child], must be subjected to special disciplines and be apprenticed to the higher qualities of adulthood, for he is not only a product of nature, but a candidate for a highly developed humanity. . . . . To many, if not most, of the influences here there can be at first but little inner response. . . . . These necessities may be hard for the health of the body, sense, and mind. Pedagogic art consists in breaking the child into them betimes as intensively and as quickly as possible, with minimal strain and with least amount of explanation and coquetting for natural interest.

This is in perfect harmony with Dr. Hall's theory of psychogenesis. The years from about eight to twelve, as has been noted previously, seem to reflect a period of great stability in the race, when presumably in some post-simian age they reached an early maturity. Whatever our view of the meaning of this stage may be, we can but adopt Dr. Hall's suggestions as to method. Drill in arithmetic, and in reading, writing, and spelling; the study of foreign languages, if they are to be thoroughly mastered; arbitrary memorization — these should be the instruments of the school at this period. It has become almost universal in school administration to give these grades, if any, into the hands of the new and unskilled teacher. Experience has taught us that less harm can be done to child-nature at this period than either before or after. As Dr. Hall says, this is the "age of little method and of much matter." The teacher is but a "pedotrieb."

Drill methods, however, are not applicable either to the periods preceding or to those following. The period of infancy is the period of play, when attention must be held by strong appeals to interest. The period of adolescence also calls for freedom and opportunity for individual expression. "Over accuracy is atrophy."

The new education sketched in *Adolescence* includes all that is good in the old; gives it a psychological basis; finds for drill methods a fitting time; but it also demands that the needs peculiar to the infant and adolescent shall also be recognized. If an extract here and there in the book would seem to indicate that Dr. Hall is an extremist, a careful survey of the whole book convinces one that the methods recommended are perfectly sane. So sane are they, in fact, that the school has already recognized the validity of the greater portion and incorporated them in its practice.

When we come to the discussion of special methods, we strike the weak place in the book. Science has been treated with deference, and a special chapter assigned it. Evidently Dr. Hall considers this "the knowledge of most worth." English, history, and drawing are discussed in the same chapter with superstitions, association, and memory. To this same chapter is also relegated the consideration of the normal school, the high school, the college, and the university. As the schools of the adolescent period they deserve a special chapter for their discussion. No part of the book is so poorly digested, so little organized, and so replete with illustrations of the deficiencies of the questionnaire method.

Although somewhat startling in his originality, we are inclined to believe that Dr. Hall has by a series of mental leaps impossible to most of his readers arrived at conclusions that will later be received in the most conservative of scientific circles. *Adolescence* bears marks of genius in the fire and poetical fervor of its language. Seldom does one have the pleasure of reading a scientific book which rises above the cold and exact phraseology that properly clothes close and careful reasoning. This book frequently leaves the realm of proved fact, and its imaginative diction is in perfect keeping with its thought. A stylistic peculiarity which we cannot so readily overlook is the coinage of new words. This may have been necessitated in a measure by the novelty of the thought; yet an old and familiar word and phrase might often have been substituted with great gain in clearness of expression.

In spite of its failings, which are on the mechanical side, *Adolescence* is unquestionably an epoch-making book in education.

TEXTILE WORK IN LINEN

EDWARD F. WORST
Principal of the Yale School, Chicago

The line of work described in the following article is a problem which was given to the pupils of the sixth grade of the Yale Practice School, Chicago, under the supervision of the principal of the school. Enough flax was grown to permit the spinning of hundreds of yards of thread and the weaving of many yards of cloth. All the apparatus necessary was made by the pupils in the shop.

One of the most interesting features of the textile work is the preparation, so far as possible, of the raw materials for weaving. Flax is perhaps one of the most simple illustrations we have. The fact that it will grow in almost any kind of soil and in almost any part of the United States makes the various processes necessary for its preparation for the spinning-wheel, and finally for the loom, easy problems which may be worked out in any grammar school.

Flax is sown at any time from the first to the middle of May, and is harvested about the last of July or the first of August. After the seed is sown, it requires no care whatever. The plant is from two to three feet in height, with small, pointed leaves and blue flowers. A field of it in bloom presents a most beautiful appearance. The stems are very peculiar, being hollow and covered with fibrous material. The flowers grow in clusters at the top of the stalks, and, when they fall off, are succeeded by round seed-vessels, the size of a pea. When the harvest-time comes, it is not cut like wheat and oats, but is pulled. As fast as the stalks are pulled, they are made up into sheaves, with all the stalks laid parallel and all the root-ends even. It is then left for a few days to dry in the sun. The seed is then separated from the stem, as illustrated in Fig. 1.

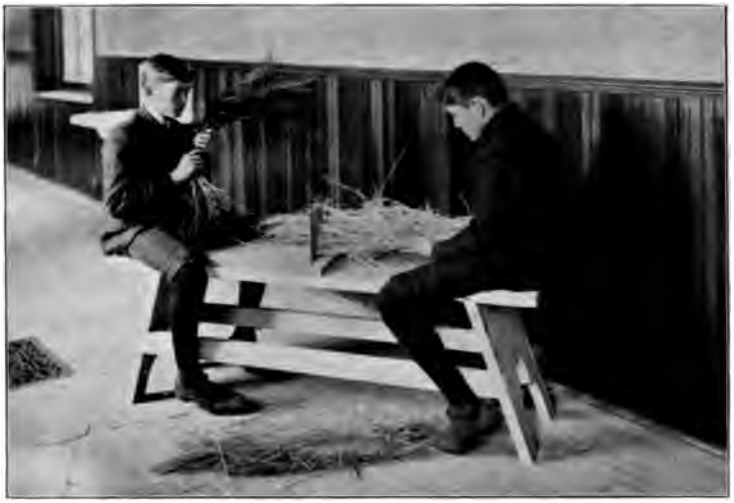

FIG. 1.— Removing the Seed.

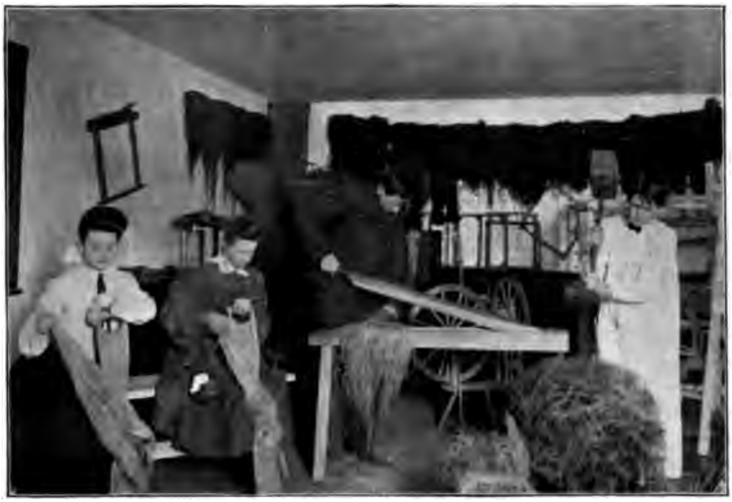

FIG. 2.— Pounding, Breaking, and Hackling.

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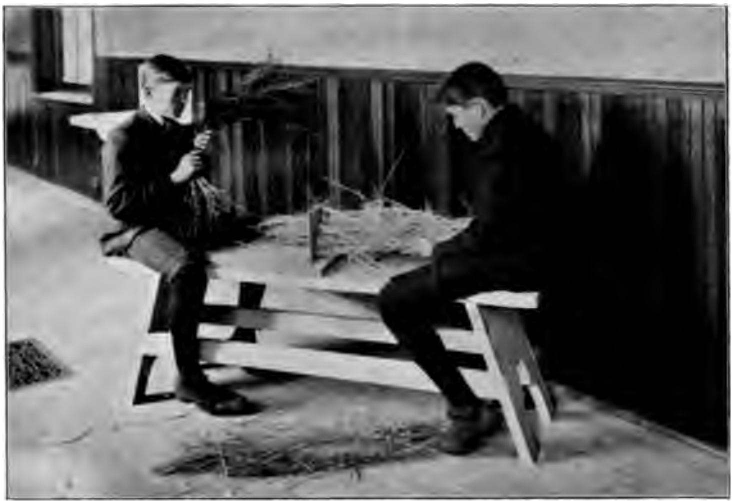

FIG. 1.— Removing the Seed.

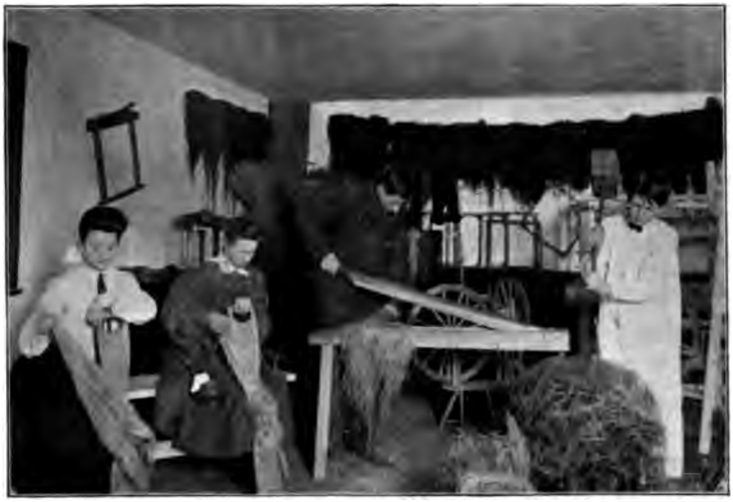

FIG. 2.— Pounding, Breaking, and Hackling.

This apparatus is easily made by the pupils in manual training, and consists of only a bench and a comb made of quarter-inch iron rods, the ends being ground to a point on the emery wheel or grinding-stone, and set in a piece of hard wood 12″ × 2″ × 1″. The comb is held to the bench by means of small clamps, or is screwed down. The process of removing the seed is rather a particular one, as great care must be taken not to injure nor break the upper stems.

After the seed has been separated from the stalk, the stalks are tied up in small bundles and placed in water to soak. Care should be taken that it is completely immersed. Standing water, a pond or slough, is preferable. It must be remembered that a wagon-load of flax is not needed with which to experiment. The quantity which it is possible to grow in a flower-bed or even a window-box, if properly cared for, will answer for experimental purposes. A small amount may be soaked in almost any kind of receptacle. The time for soaking varies according to the temperature of the water. Usually three of four days is sufficient in the vicinity of Chicago. When the fibers begin to separate from the stem, and the woody core of the stalk snaps readily, it should be removed from the water. If allowed to remain there too long, the fibers as well as the stem rot. This process is called retting the flax. After it is removed from the water, it is spread upon the grass to dry and bleach.

The retting process may be carried on without placing the flax in water. It is accomplished by spreading the flax on the grass, allowing it to remain until the dew and rain have done the retting. This method requires a longer time. With the inexperienced person the results might be more satisfactory if the two methods were combined. Soak in water for about two days, and then spread upon the grass, allowing the dew and rain to complete the process.

We are now ready to begin the breaking. Before this process is begun, the stalks are thoroughly dried. With us the sheaves of flax were placed upon the register. This causes them to become very brittle. Before the flax is placed in the brake, it is put on a block of wood and thoroughly pounded, as shown in the right of

Fig. 2. This really begins the breaking. It is then placed in the regular brake, as shown in the center of Fig. 2. This brake is a simple piece of apparatus, also made by the boys. We have three brakes, of varying sizes, the smallest being made in such a way as to break such parts of the woody core as are not broken by the largest. This breaking is done to get the fibers free from the woody cores of the stalk and thus make them ready for use.

After the breaking has been thoroughly done, what remains is hackled. The hackling consists in passing the flax through a series of combs, as represented in the left of Fig. 2. The hackle is not a difficult piece of apparatus to make. It consists of wire nails ground into long, sharp points. These are driven through a circular or rectangular piece of wood, banded with an iron strip, and glued and screwed to a support, as shown to the left of Fig. 2. The process of hackling removes many of the pieces of stalk not removed by the brake, and it also splits the fibers. Even after this process is completed, there are still bits of the stalk left. To remove the last of it, the flax is brushed, as is shown in Fig. 3.

The flax is now ready for the distaff, and is spun into thread, as shown in Fig. 4. If linen cloth of the natural color is desired, it is woven into cloth at once; but if the white effect is wanted, the thread is sometimes boiled and bleached before weaving. Oftener, however, the thread is woven and the cloth bleached. The quickest way to accomplish this is to use chloride of lime. The part of the thread to be used as woof is taken from the spool of the spinning-wheel and placed on the bobbins of the shuttles to be used in weaving. That part of the thread to be used as warp is measured off on a large reel. From the warping-mill it is taken to the warp-beam of the loom. The ends of the thread are threaded through the harnesses and reed, and fastened to the cloth-beam just beneath the harnesses. The loom is now ready for the woof.

This line of work might readily be carried out in schools where space for planting purposes is not so valuable as in Chicago and

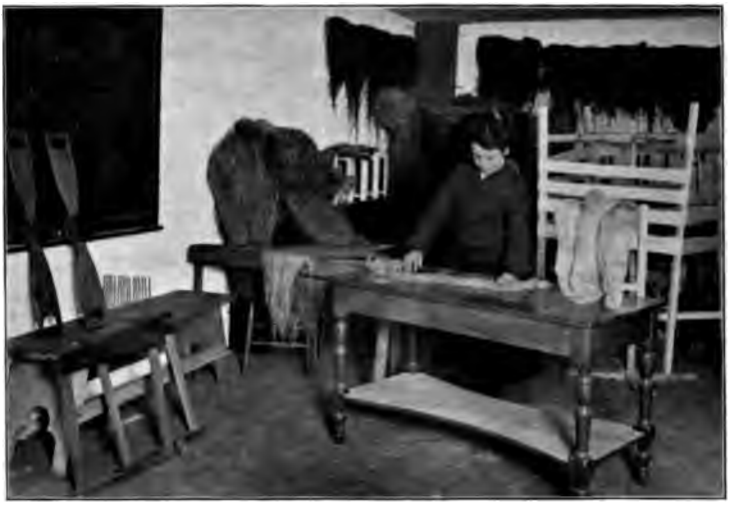

FIG. 3.— Brushing the Flax.

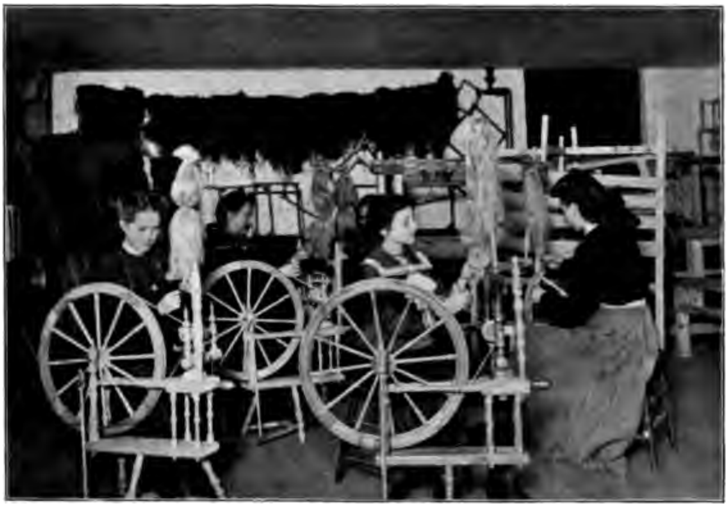

FIG. 4.— Spinning.

vicinity. It is especially adapted to the sixth grade, because of its close relation to the history work of that grade and the linen industries of Ireland. So far as possible, all the hand-work in the Yale School is related to other lines of school work as outlined in the course of study.

THE MAKING OF BEET SUGAR

SEVENTH GRADE — FRANCIS W. PARKER SCHOOL

HENRY T. MORTENSEN
Teacher

Experiments in the growing of sugar beets, and the manufacture of sugar from them, have been carried on by the children of the sixth and seventh grades at intervals, through a period of three years. During this time the children have studied the various industries of the United States, and the manufacture of sugar was chosen as a typical industry, offering opportunities for study and experiment adapted to the comprehension and ability of the children.

Each attempt has contributed some improvement in method, and the results each time have been more satisfactory than those of the preceding year. Though sugar has not been obtained, the results have been sufficiently encouraging to the class to warrant the continuation of the work.

In the spring of 1904 two plots, each four by sixteen feet, were set aside for the growing of sugar beets. The sixth and seventh grades planted seeds of "Vilmorin's Imperial" variety. The seventh grade mixed one and one-third pounds of fertilizer with the soil of its plot, while the sixth grade used double that amount. Before the seeds were planted the classes estimated the total expense of planting the beets to be $34. This included the hauling and spreading of loam, the plowing under, the price of seed, and the price of the fertilizer. The seeds were planted in May, 1904. At the proper time the plants were thinned, and by the end of the school year were in condition to be left until harvesting time.

When the school opened in October, the beets had attained a considerable size, but showed no signs of ripening. The approach of the heavy frosts of November, however, made it necessary to prepare for harvesting.

FIG. 1.— The Sugar Beets in the Garden.

For supplementary reading the seventh grade used the following articles, entitled "Sugar Beets," "Maturing of the Beet," and "Manufacture of Sugar." These were adapted from Hamburger's *Beet Grower's Manual* and given to the children in typewritten form.

SUGAR BEETS

A good sugar beet should be regularly shaped (cone-, pear-, or olive-shape). Many side roots are disadvantageous, because they make cleaning difficult and increase waste. The side roots and poor shape of beets are often due to shallow plowing or a too impervious subsoil. Small beets are, as a rule, richer in sugar than large ones. The ideal weight is considered to be about one and a half to two pounds, and the beets should not be more than fourteen inches in length. The head should be small.

The leaves of the plant should be thick, and those which lie flat are to be preferred, as protecting the beet against frost.

It is important not only that a sugar beet should be of the proper shape and size, but also that it should be grown in such a manner as to secure the protection of the soil for all of its parts except the neck and foliage. This position can be secured for the beet only by growing it in a soil sufficiently pervious to permit the penetration of the tap root to a great depth.

If the beet in its growth should meet a practially impervious soil at a depth of eight or ten inches, the tap root will be deflected from its natural course, lateral roots will be developed, the beet will become disfigured and disturbed in shape, and the upper portion of it will be pushed out of the ground. Experience has shown that the content of sugar in the portions of a beet which are pushed above the soil is very greatly diminished.

MATURING OF THE BEET — HARVESTING

A sure sign of the ripening of the beet is the change of the dark green color of the beet fields into a light yellowish-green. All of the large outside leaves will be found to have withered away, leaving only the "heart" with its yellowish-green leaves to stand. Of course, it is only by chemical analysis that the ripeness can be accurately established, and the beets should not be considered fully matured until the sugar content is found to increase no more.

It requires about four and one-half to five months after planting to procure ripe beets. The time of our Indian summer is the main period of the formation of the sugar in the beet. The beet does not grow larger, but its weight and sugar content materially increase. Simple freezing of the beet would not cause any change in the sugar content, but alternate freezing and thawing would cause it to turn black and reduce its content. A sudden change of temperature unfavorably affects a slightly frozen beet.

After the beets have been loosened with a thin bladed plow which splits the earth between the rows, or a puller which loosens without removing them, the beets must be topped. The topper grasps the leaves in the left hand, and with the right removes the crown or top of the beet by one blow, cutting just at the base of the bottom leaf.

It is important that the top of the beet be cut off down to the neck so as to include with the top all that portion of the beet to which the stems of the leaves have been attached. The object of removing this portion of the beet is to prevent the mineral salts, which have accumulated in large quantities therein, from entering the factory. These mineral salts exercise a very deleterious influence on the crystallization of sugar, and therefore should be removed. They are well fitted for fertilization purposes, and are of more value when left upon the soil than when removed to the factory.

MANUFACTURE OF SUGAR

Internally the beet root is built up of a large number of concentric rings, formed of a much larger number of small cells or cylinders, each of which is filled with a watery solution of several substances other than sugar.

The first process through which the beets are put after being washed and weighed is that of slicing. The slicing is done by a machine which does it in such a way that the slices will not lie too closely together when the diffusing liquid is passed through.

As explained above, the cells contain impurities. Only crystallizable material — i. e., the sugar in this instance — is able to pass through the cell walls. It is desirable, therefore, that the slicer rupture as few of the cells as possible, and at the same time expose as large a surface as possible, thus keeping the sugar free from impurities and making the cell membranes accessible to the diffusing liquid.

By the methods formerly used the beets were ground into a fine pulp. Thus the cells were torn, and their entire contents, sugar as well as salts, and other impurities, were carried into the juice which was obtained from the pulp by pressing, maceration, or centrifugal force. Thus a great deal of foreign matter was present in the juice and made its purification very difficult. At present, however, what is known as the diffusion process is universally used. It differs from the old one in that the juice is no longer separated by pressure, but by diffusion. The hot water acting upon the cell membranes of the sliced beets allows the sugar in the cell to diffuse with the water on the outside until it contains the same percentage of sugar as that on the inside.

By means of a revolving chute, the fresh beet slices, called cossettes, are conveyed into large, cylindrical, closed tanks or cells of a diffusion battery on the floor below. These cells (each holding about two to two and a half tons) are arranged in a circle or in straight rows, connected by piping and valves to facilitate filling with fresh sliced beets, and discharging the pulp or slices from which the sugar has been exhausted. It is in the diffusion battery that the sugar held in solution in the cells of the beets is extracted.

The operation proceeds as follows: First one cell is filled with cossettes, and hot water (80° C.) is admitted until the cell is filled. Assuming now that the beets contain 12 per cent. of sugar, an interchange takes place, and the cossettes give up their sugar until only 6 per cent. remains, the other 6 per cent. having been taken up by the water. Meanwhile the next cell has been filled with cossettes, and the water containing 6 per cent of the sugar is forced into it, having been heated to 80° C. in transit. In this second cell again an interchange takes place, but the water, containing already 6 per cent sugar, will extract but half the difference between the sugar in it and in the cossettes; this water will now contain 9 per cent. of sugar, and is forced into the third cell, where it will again absorb half the difference between its own sugar and the cossettes. The same process is continued until the water has become sufficiently rich in sugar for evaporation. In the meantime fresh water has again been forced into the first cell, and passes through the number of filled cells in regular order. When the cossettes in the first cell have become exhausted of their sugar by continued passage of fresh water, the contents are discharged through a trap door and replaced by a fresh charge, and cell No. 1 now becomes the last in the series. The second cell is next to be exhausted and recharged in its turn, and thus every following cell continuously.

After the juice has been taken from the diffusion battery, milk of lime is added, which combines with the non-saccharine substances. To remove these, carbonic-acid gas is passed through the juice, and the precipitate is removed by filtering. The juice is treated with sulphuric-acid gas, and passed on into evaporators, where it is boiled down to a syrup. When this stage has been reached, it is boiled to a grain in a vacuum pan. The large crystals are separated from the smaller ones and the molasses by centrifugals. These are then bleached, dried, and packed ready for the market.

After reading the first article, the class examined the stand of beets in the garden and made written reports on its condition, of which the following is among the best:

OUR BEET CROP

HELEN CONNOR

We found our sugar beets in fairly good condition, and pulled up several that had grown above the ground a great deal. These beets showed us that they had grown a few inches (seven or eight) into the soil, but had come to impervious soil, through which their roots could not penetrate, so they had turned to one side and also had forced the beet far out of the ground.

The part that remains above the ground has to be cut off before the rest of the beet can be made into sugar, because that top has minerals in it that would prevent the sugar from crystallizing. *(Corrected paper.)*

No differences in the crops of the two plots due to the fertilizer were discovered.

The severity of the frosts necessitated the removal of the beets from the ground November 15, 1904. The beets, topped, trimmed, and washed, weighed 160 pounds, averaging about one and one-half pounds each. Sample beets which were tested by Mr. W. W. Wolfe, chief chemist of the Rock County Sugar Co., showed a sugar content of about 12 per cent., which is very low. A good beet should contain over 20 per cent. of sugar.

The following description of the process used by the class was written by one of its members:

MAKING OF BEET SUGAR

CLAUDINE V. STURM

As the beets were pulled up from the garden, the tops were chopped off with a hatchet. It was necessary to use a hatchet, because none of the knives at the school were heavy enough to cut through the beets. After this they were brought to the laboratory, where we washed and weighed them. The next process was the shredding. This we did with a simple kind of grater. See Fig. 2.

After the shredding we put the cossettes (shredded beets) in a large canvas. This canvas we folded and put into a large press, which squeezed all the juice out of the cossettes. Into this juice we put lime, which combined with the impurities, and kept the juice from fermenting.

The carbon dioxide which we passed through the juice made all the impurities settle to the bottom of the jar. This gas we made by putting marble chips into a generator. On this marble we poured hydrochloric acid, and the gas formed passed from the generator through a glass tube into the jar with the juice in it.

To get this purified juice from the jar without disturbing the sediment, we siphoned it from one jar to another. This juice we

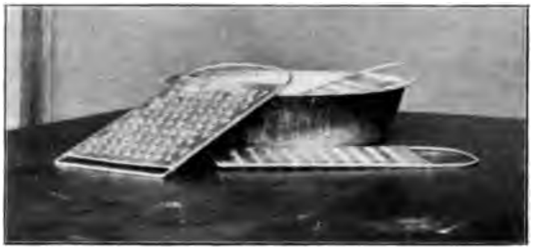

FIG. 2.— Graters.

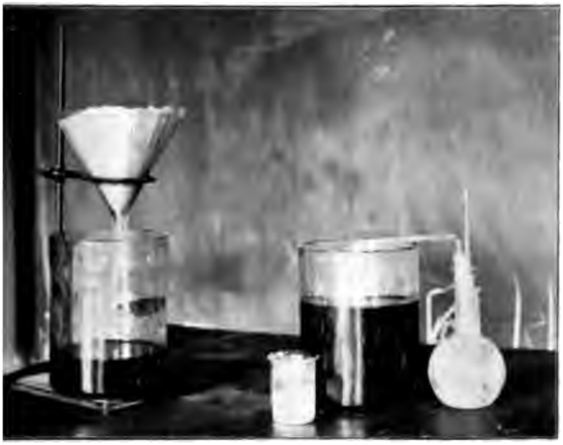

FIG. 3.— Apparatus for Adding Lime, and for Carbona-ıg and Filtering Juice.

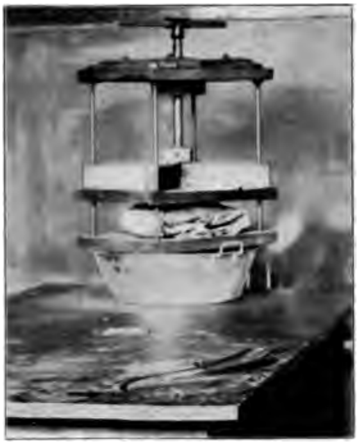

FIG. 4.— The Press.

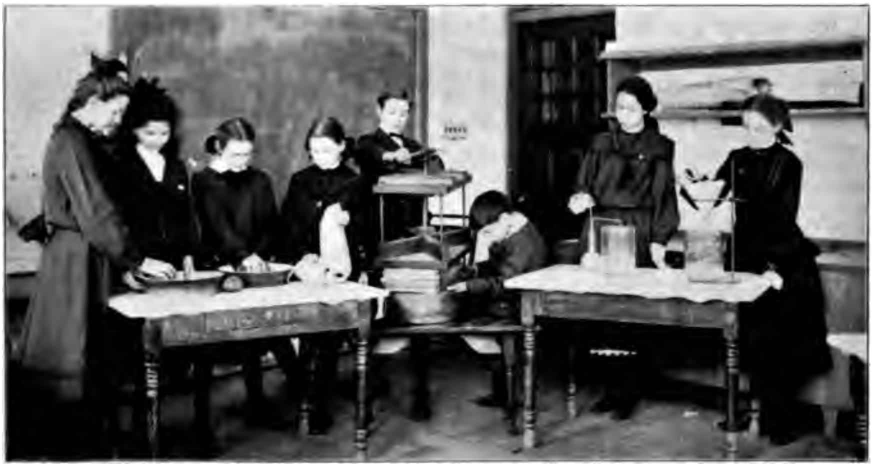

FIG. 5.— Preparing the Beets.

put through filter paper, which further purified it. The last process was the boiling down of the juice. This was done in a granite-ware pan, which was placed over several Bunsen burners. It required about fourteen or fifteen hours of boiling to reduce it to the stage at which crystallization should take place. *(Corrected paper.)*

The product resulting from these experiments is a thick, dark-brown substance, which, according to sugar experts, contains a considerable percentage of sugar. The cause of its failure to crystallize is probably twofold: first, that at some time during the various stages it became acid; second, that after the final boiling down it was allowed to cool too rapidly.

Such apparatus as could be devised and used in the school was employed in the work. The shredders were such as are used in kitchens for shredding vegetables (see picture, Fig. 2). The press was designed as a book-press, but it was fairly well adapted for squeezing the juice from the beets.

It was necessary to incline it so that the juice might run into the pan below. A press was needed to obtain the juice from the beets, because the diffusion process previously explained gives too dilute a product to be practical with the facilities for handling it which are available in the school.

During the winter term the grade will attempt to obtain sugar from the product of the experiments, by a process suggested by Mr. Alfred Musy, sugar expert, of Detroit, Mich. The process consists of dissolving the product in water and precipitating the sugar by means of barium hydrate. This precipitate must be washed, dissolved in hot water, and carbonated. After filtration, it must be evaporated again, allowed to cool slowly, and very thoroughly washed.

NOTE.— This work with beet sugar has been only a part of the science work of the sixth and seventh grades. For a complete outline see the Catalogue of the Francis W. Parker School.

A MORNING EXERCISE

SUGAR-BEET MAKING

As an outcome of the work in the making of sugar from sugar beets, the seventh grade gave a "Morning Exercise" to the entire school. While a group of children performed all the operations involved, except those of topping, washing, and weighing, others explained the processes as follows:

WHAT I TOLD IN MORNING EXERCISES

MARGARET BENTLEY

I told the school that we took from the ground the beets which we planted last year. We chopped off most of the tap roots and all of the beets which had been pushed up above the ground. Then we washed them. When we weighed them, we found the total weight to be 160 pounds.

I showed the children some of our beets, which were almost all short and chunky. I also compared them with two beets from a sugar factory. One was from French seed, and the other from German seed. The French beet was considered the better, because it was longer and thinner. *(Corrected paper.)*

WHAT I TOLD IN MORNING EXERCISES

FLORENCE WIEBOLDT

After the beets were weighed, they were shredded. The shreds looked very much like cold slaw. They were wrapped in canvas, and the parcel was put into the press and squeezed until all the juice was pressed out. *(Corrected paper.)*

WHAT I TOLD IN MORNING EXERCISES

LETITIA FYFFE

After the juice had been squeezed from the shredded beets and put into a jar I tested it with litmus paper and found that it was neither acid nor alkaline; so I added enough lime to cause the liquid to turn the litmus paper blue.

Then I used a Florence flask with a quantity of ground marble at the bottom of it. From the flask a bent tube reached into the jar of juice. Through another tube which led into the flask I poured hydrochloric acid (see picture, Fig. 3). The acid, acting upon the marble, made carbon dioxide. The gas passed through the bent tube into the sugar juice, causing all the impurities to settle to the bottom. *(Corrected paper.)*

WHAT I TOLD IN MORNING EXERCISES

LAURA DELANO

After the impurities had settled to the bottom of the jar, I siphoned off the upper part of the sugar juice and put it into the filter (see picture, Fig. 3). After it had all filtered through, I put it into a pan ready to be boiled down into sugar. *(Corrected paper.)*

NOTES FROM PARENTS' ASSOCIATIONS

MRS. HELEN MALEY HEFFERAN
President of Illinois Congress of Mothers, Chicago

At the December meeting of the Parents' Association of the Chicago Normal School the subject of "Christmas Giving" was discussed.

Mrs. H. W. Thurston spoke of the opinion that is expressed so frequently in these days, that the spirit of Christmas giving is not what it should be; that it is marred by overdoing and overstrain; that a sense of obligation and of paying debts often takes the place of free expression of love and good-will. Mrs. Thurston maintained that these things are the result of the strenuous method of life in American cities; that something enters into our home for its detriment and into our school life to its harm. To quote from the speaker's words:

> We give ourselves too little leisure to consider the spirit of anything. We are too much absorbed in *doing* things to consider *why* we do them or how they should be done; too much absorbed in buying Christmas presents to consider sufficiently the spirit of giving. The spirit of Christmas giving is *love*. How this would simplify matters for us, if we were to allow it! Let us give in love — never for any other reason — and teach our children to give in love.

Mrs. Thurston advised that the children begin with the home circle. As the child grows, his powers of love and sympathy should expand and grow with him, taking in a wider and wider circle of relatives, friends, and neighbors, until the man and woman in maturity shall have a heart to embrace humanity.

Mrs. A. D. Hefferan said that in the home it was essential that time be given for the children to plan for their gifts; that one should strive for simplicity, not expenditure of money, but some expenditure of thought and effort; that the mother should plan to secure co-operation between older brothers and sisters. This Christmas planning and giving — for love alone, simply and thoughtfully and painstakingly — would develop real character.

Miss Melva Latham then spoke from the teacher's standpoint. She said that the making of Christmas presents in the room created a beautiful atmosphere, for the children had a definite purpose in the making. When the present was to be used by one who was loved there was always a joy in creating. When children were happy, they were good. The results from Christmas work in the schoolroom were always excellent. First, concentration was perfect, because the motive underlying the work was the best — superlatively unselfish. Patience was developed.. A child is willing to do again and again, because working for one he loves. Here again the motive controls him. Then the timid child has an opportunity for individual work which strengthens him for his regular school work. Miss Latham emphasized strongly the necessity for appreciation on the part of the recipient on account of the struggles of children to produce something worth while. Be *sure* to *use* whatever is made, if ever so poorly made, or even a trifle in itself. She closed with that beautiful quotation from Jacob Riis' "Is There a Santa Claus?"

> Because, don't you know, Santa Claus is the spirit of Christmas; and ever and ever so many years ago, when the dear little Baby was born after whom we call Christmas, and was cradled in a manger out in the stable because there was not room in the inn, that Spirit came into the world to soften the hearts of men and make them love one another. Therefore, that is the mark of the spirit to this day. Don't let anybody or anything rub it out. Then the rest doesn't matter.

A meeting of Englewood High School Parents' Club on Thursday afternoon, January 19, presented some novel features. The announced topic for discussion was "Fraternities and Sororities" — a subject of such interest to the pupils that they begged to be allowed to attend and to defend their societies. The number in attendance was so large that the meeting adjourned to the assembly hall, and very few of the 350 seats were unoccupied.

The concensus of opinion from high schools throughout the country was presented by Principal Armstrong, Miss Ball, and Mr. Miller (of the Englewood High School faculty), and was strongly against the existence of fraternities and sororities in the high schools.

The meeting was then thrown open for general discussion, and the most prejudiced listener was forced to admire the frank and fearless manner in which the boys and girls presented their side of the argument, as well as their ease and readiness of speech in the presence of so large an audience. Kindly feeling prevailed throughout, as teachers, parents, and pupils drew together in a sort of family council.

While it cannot be said that the boys and girls who favored fraternities and sororities when they entered the hall were of a different mind when they left, yet they left with something new to think about, and since no bitterness of spirit resulted, they will think and think rationally. What more could be asked?

The Englewood High School Parents' Club has always drawn near to the ideal organization of its kind, inasmuch as it has clung to the "conference" plan, and has not permitted extraneous "programs" to interfere with its practical consideration of practical matters. This meeting came even nearer to the ideal, perhaps, than any former one, since it admitted the child himself to the discussion of what was best for him.

Throughout the state of Illinois there is much interest in the question of a closer touch between the home and the school. The superintendent of Coles County requested that a meeting be held in every school in the county on a certain date for the promotion of such a co-operation. Each teacher prepared a short program, which was followed by an informal discussion of school problems. This superintendent has also been holding parents' meetings throughout the fall in the rural schools. These have been largely attended, and it is exceedingly interesting to see the school-yard surrounded by the vehicles in which many of the patrons came. The teachers explain the industrial work the children are doing—sewing, cutting, etc. There is an exhibit of the work, and at the conclusion refreshments are served.

Every school in Charleston now has a parents' club as an adjunct which is an educational necessity, and the community is, in consequence, alive to the interests of the schools. A meeting of the parents of Charleston high-school pupils was held in the assembly hall on the evening of January 13. Mr. J. A. Shortess, president of the board of education, opened the discussion on "The Effects of Irregularity of Attendance on Later Habits." He discussed the subject from a business man's standpoint, showing how good habits were the basis of success. He emphasized the fact that responsibility for absence and tardiness rests not so much with the teacher as with the parent. Hon. H. A. Neal followed with suggestions for overcoming irregularity in attendance. Mr. Jeffrey, principal of the high school, cited some of the flimsy excuses offered by pupils and parents for absence and tardiness. It appeared to be the sense of the meeting that excuses should not be asked for, as they tended to justify the pupil in his delinquency. Mr. Elwood, superintendent of the Charleston schools, spoke relative to the semi-annual examinations. He took as the basis of his remarks "The end of education is a responsible human being."

The superintendent writes that these meetings will be held regularly once a month.

EDITORIAL NOTES

Home Work for Children

In the development of our educational system the organization of the activities of the pupils in the home is rather behind that found in the best schools. This is partly because of the feeling that it is the school's function to utilize all the time of the pupil not actually needed for recreation, and partly because the modern home, for various reasons, does not always seem to be just the place where children are needed.

Home Work in the Past

The question of home work for pupils rests upon debatable ground. There are parents who expect the school to make the demand, and they are willing so to free the children from other duties that they may meet it. The picture of schoolboys and schoolgirls of other days trudging along from school to home with a load of books indicative of tasks that must be worked out before next day; and from home to school with the same burden, but with problems that have been solved by the fireside — this picture is too vivid in the memory and imagination of most parents for them to realize easily that there may be a good school without such outside preparation.

Less, Not More, Home Work

It would seem, however, as the present movement toward a unification of the interests of the home and school go forward, that the school, directly, will furnish less rather than more home work for the children. If the school properly performs its function of giving the pupil a day filled with educative work, it is difficult to see why it ought still to pursue him into the period that he should have for recreation, or into the hours when he would better be asleep. After a business man has spent a day in his office or store; or, after a farmer has driven his plow or harvested his grain or cultivated his crops during the day, neither the one nor the other feels that he ought to have "home work" of the same kind. Even the well-disciplined professional man knows that his "home work" should follow some new channels of thought, if he is to recuperate himself properly for the next day, and if he is to endure.

There seems to be no valid objection to applying the same line of argument to the work of the children. In the course of a day, some six hours in length, a pupil will have, perhaps, some work in wood, clay-modeling, cooking, textiles, gymnastics, drawing and painting, with enough of reading, writing, and arithmetic along with it all to keep every moment properly and fully employed. This is legitimate work, and there is plenty of it as long as it lasts. But after school, when the home takes hold, what then? In the past, when school was almost wholly a matter of books, the assignment of home work was easy. So many pages were set off to be read; so many problems in arithmetic to be solved; so many questions in geography to be answered — it was all beautifully definite and very easy.

Homes Not Prepared

But conditions have vastly changed. There is not one home in a thousand that has any provision for enabling the pupil to carry forward any of the hand-work that he is doing in school, even if it be admitted that he should do so. In reading, we no longer use a single book, to be completed in a certain time by taking a fixed amount each day. The reading is from a library of books, large or small, and it is not easy for the home to provide the necessary conditions. In arithmetic the tendency is to solve problems when they arise, and the same principle applies to most of the subjects which used to be considered legitimate for home work. It is generally recognized now, also, that these subjects can be studied with much greater advantage and much more economically in the school, under the immediate direction of the teacher, than elsewhere. Most of the academic work of the pupils that can be done outside of school, therefore, is coming to be of an incidental and general character.

Home Preparation Needed

It must not be inferred, though, that the school no longer demands a preparation for the duties with which it invests the children. It indeed requires a more delicate and refined preparation for work than ever before. This is true because its work is now carefully planned with a deeper appreciation of child character and a truer insight into the essential things which develop it. The home influence was once considered sufficient if it sent the children to school able to say words and recite formulæ. But everybody knows nowadays that that preparation is of the cheapest kind, in terms of human worth, and that it is the easiest possible to provide. The "home work" of the children that is most valuable to the modern school is not that which can be accomplished mainly by the mouthing of words, or the conning of pages, but rather by means analogous to those which send the merchant back refreshed to his store, the lawyer to his client, the minister to his pulpit, the farmer to his field—all rejoicing in a new day.

What the Home Can Do

That this end may be attained, there are several important things that the home can do by way of preparation. In the first place, it is necessary that the hygienic conditions of the pupils be carefully looked after. Proper food, in right amounts and at proper times; sound sleep, with plenty of outdoor life, will bring a mental rush and enthusiasm to the school that will immensely increase the efficiency of teaching in hundreds of cases. Health, then, first, and above everything else—health! Better a thousand times to be ahead in health and behind in his classes, according to the ordinary standards of estimating academic standing, than for the pupil to be ahead of his grade and behind in health.

Cultivation of Spirit

In the second place, the school has a right to expect that the home shall give the pupil a preparation of spirit. This it cannot do, however, unless the parents are willing to study the school thoughtfully and continuously, that they may in a measure understand its aims and the methods by which it seeks to realize them. There is no more pathetic figure in a schoolroom than a boy or girl who oscillates between a home that is pulling in one direction and a school that is moving in another.

Cultivation of Responsibility

In the next place, as "home work," the school requires that the spirit of responsibility and helpfulness which it seeks to develop be strongly supported by some kind of useful productive activity about the household. The school tries to engender this spirit through its peculiar duties;

the home must do the same. The intellectual and moral leakage of character that takes place after school hours, on Saturdays, Sundays, and holidays, through idleness, is enormous, and for this the home is jointly responsible with the school.

Home Duties of Children

An eighth-grade teacher recently asked her pupils to write out a description of their home duties, and the answers read as though the writers were all the children of widows. Most of these papers showed that the real "home work," to put it mildly, is of an aimless and desultory character, and that it is provided for mainly by the mothers. It is safe to say that if the school were not organized on a sounder basis of industry than such homes, its continued existence could not be insured. The school certainly cannot expect to make much headway in creating feelings of responsibility in six hours, if during the rest of the day the pupils are freed from everything that involves it.

Bad Habits in the Home

The demand of the modern school for this kind of "home work" is difficult to meet, because it strikes at the center of the organization of the home as a social unit. The replies of the pupils, in the case referred to above, show that there is but little chance in many households for the children to participate in actual home-building, and but little attempt to organize systematically the meager opportunities that do exist. As a result, when the pupils come to school they are generally careless, thoughtless, and irresponsible.

Fraternities and Sororities

It is to this lack of a co-ordinating influence on the part of the home, rather than to any adolescent peculiarities, that pupils so easily form themselves into societies of different kinds, which are a feeble attempt to organize their young energies toward some definite end. Psychologists try to account for these on different grounds, but the cold fact is that adolescence is as old as the race itself, while fraternities and sororities at that period are comparatively new, and their history strikingly coincides with the marked changes that are taking place in the homes.

These changes are many and, indeed, of a vital character. Looking at it from the side of the school, the father as a moral force has practically disappeared. As far as his influence upon the school goes, he has become in the home a rudimentary organ, a kind of vermiform appendix, usually passive, but sometimes he becomes stirred into pernicious activity and makes trouble—generally over the long-distance telephone. The much-deprecated exodus of men from the teacher's profession is not to be deplored half so much as the fact that the father as a strong organizing educational force in the family has become as rare as the dodo.

Where Is the Father?

The Mother

The conditions have changed, too, for the mother. With most of her ancient industries taken from her hands by the great factories of various kinds, she naturally has turned her time to account in other directions. There are few women today who are not more or less involved in some form of public life, the influence of which is not directly of the old home-making type.

Lack of Co-ordinating Influences

Other changes, too, of a disintegrating character have taken place. The Lares and Penates of the ancient family life have long since tumbled from their niches by the fireside. The morning and evening prayers that once called the family together around a common altar have passed away, taking out of home life one of the subtlest influences ever felt in the organization of the family. Steeped as they were in superstition, they yet served a mighty purpose. Twice a day the family as a whole came together to voice in common their hopes and aspirations; by moral contact as by touch of elbow they inspired each the other to stand firm in a common cause, and the sorrows of one were softened by the sympathy of all. What matters the quibble whether or not prayers are answered from the Great Beyond! While it existed, this daily moral inventory of the essentials of living, the daily fusing and blending of the individual with the family spirit, whatever else it may have done, in the minds of those who participated, it forever fixed the family as the unit of social life. And the modern household, as yet, has devised nothing that exactly takes its place. This does not mean, necessarily, that the world has ceased to grow better; we are simply to realize that it is growing to be different from what it used to be.

Type of Home Work Needed

The lack of solidarity in home influence toward the development of feelings of responsibility for definite results having an actual value is the greatest obstacle in the way of the modern school. The new school is as anxious for the pupils to have "home work" as are the parents, but the need is for that of a different type. Home work for the pupils carefully organized by the parents out of the many duties of the common household will do more to increase the efficiency of the schools than all the midnight oil that can be burned in pondering over books. And, on the other hand, a more careful organization of school duties in the light of the home's demands will go a long way toward the nourishment of the family spirit. The proper way to examine a school is to make an inquiry as to the influence of the pupil at home and as to his aspirations as they work themselves out in the family relations. The report cards generally go in the wrong direction; they should be made out by the parents, not by the teachers. The most serious criticism a teacher can get is to have the parent inquire as to his child's progress in school.

In a Nutshell

The best home work for the pupil, therefore, as a preparation for his lessons in school, is that which generates a feeling of responsibility in the family life; in a word, what is needed is the development of an *attitude of mind* that faces toward efficiency and usefulness as naturally and unconsciously as the leaf turns toward the sun. With this as a foundation, the schools can advance to levels of conduct and scholarship that as yet have never been realized.

W. S. J.

BOOK REVIEWS

Young Folks' Library. Third Edition, revised in conference by Thomas Bailey Aldrich, Editor-in-Chief, President William Jewett Tucker, Hamilton W. Mabie, Henry Van Dyke, Nathan H. Dole. Twenty volumes, illustrated. Boston: Hall & Locke Co.; Chicago: Auxiliary Educational League, 540 Fine Arts Building.

This is an era of books and more books. Publishers are no longer content to issue books in singles; they come at one with sets of encyclopedic scope. It is the set of books that needs to be regarded with great suspicion. It is difficult enough to find a single volume that is worth a permanent place in one's library, and a publisher is assuming a good deal when he asks you to make a place for his latest issue; but, *sets of books!* They are apt to be such thin dilutions, such transparent attempts to wring the last cent, such ranting and drivel in gilt and turkey red, that one need not be taken in unless he chooses this way to dispense sweet charity.

But there are sets of books that are different, and the one forming the subject of this review is one of the exceptions. Here is a set of twenty volumes dealing with myth, legend, history, science, poetry, tales of men and beasts — all in accord with an intelligent plan and in the original classic forms in which they were first given to the world. These books, ranging through the fields of literature and science, have been edited by competent men whose names are a guarantee to the worth of the work. The series is so planned as to meet the needs and tastes of readers from the kindergarten stage to the period of maturity. The school or family, therefore, that owns the set possesses a library of comprehensive scope and of classic merit.

Within the compass of a review it is impossible to go into the details of each volume, but a list of the titles with the editors will give at least a fair notion of the scope and grade of the work.

I.	*The Story Teller*	Charles E. Norton
II.	*The Merry Maker*	Joel C. Harris
III.	*Famous Fairy Tales*	Roswell Field
IV.	*Tales of Fantasy*	Tudor Jenks
V.	*Myths and Legends*	Thomas J. Shahan
VI.	*The Animal Story Book*	Ernest Thompson Seton
VII.	*School and College Days*	Kirk Monroe and Mary H. Catherwood
VIII.	*Book of Adventure*	Nathan H. Dole
IX.	*Famous Explorers*	Edwin E. Sparks
X.	*Brave Deeds*	John L. Trowbridge
XI.	*Wonders of Earth, Sea, and Sky*	Edward S. Holden
XII.	*Famous Travels*	George A. Henty
XIII.	*Sea Stories*	Cyrus T. Brady
XIV.	*A Book of Natural History*	David S. Jordan
XV.	*Historic Scenes in Fiction*	Henry Van Dyke

XVI. *Famous Battles by Land and Sea*..........................John D. Long
XVII. *Men Who Have Risen*..............................Hamilton W. Mabie
XVIII. *Book of Patriotism*....................................George F. Hoar
XIX. *Leaders of Men, or History Told in Biography*........William R. Harper
XX. *Famous Poems*.........................Selected by Thomas B. Aldrich

Each volume has about four hundred pages, and contains at the end brief biographical notes of the authors whose writings appear in the volume, and also a well-selected list of books designed for supplementary reading and further study. Accompanying the set is an additional volume called the key. This is a book of reference containing complete indexes, a pronouncing vocabulary, notes on literary sources and on names and places, events, references, and allusions in the different volumes composing the set. This feature is an exceedingly valuable one and greatly enhances the usableness of the work. The series can be recommended without qualification. W. S. JACKMAN.

The Western United States. By HAROLD W. FAIRBANKS. Boston: D. C. Heath & Co. Pp. 302; 135 illustrations.

This is an excellent geographical reader, written by one personally familiar with the western part of our country and interested in educational work. Professor Fairbanks states in his preface that in the preparation of this book he has had in mind the needs of the upper grammar grades. The book may, however, be highly recommended for supplementary reading in connection with high-school courses in physical geography or physiography. The book does not cover "the field of western geography in a systematic manner, but instead . . . . pictures . . . . as graphically as may be, some of its more striking and interesting physical features, and the influence which these features have exerted upon its discovery and settlement." Among the very interesting chapters in the book are the following: "A Trip into the Grand Canyon of the Colorado;" "How the Columbia Plateau Was Made;" "The Canyons of the Sierra Nevada Mountains;" "The Last Volcanic Eruptions in the United States;" "The Mud Volcanoes of the Colorado Desert;" "The Story of Great Salt Lake;" "Death Valley;" "The Pony Express;" "How Climate and Physical Features Influenced the Settlement of the West."

The Frozen North. By EDITH HORTON. Boston: D. C. Heath & Co., 1904. Pp. 157; illustrated.

The secondary title of this work is *An Account of Arctic Exploration for Use in Schools.* The book consists of a series of short sketches, written presumably for children in the upper grades, and furnishing interesting accounts of the explorations into the far North. The famous journeys from the time of Sir John Franklin to those of 1902 are so well told that the reader could not fail to appreciate the main geographic features of the North Frigid Zone, and to know something of the hardships which the pioneers of exploration in that country endured. There are also chapters descriptive of the strange people who inhabit these cold countries — their dress, their ways of living, their customs, and their manners.

A River Journey. By FRANCIS W. PARKER AND NELLIE LATHROP HELM. New York: D. Appleton & Co. Pp. 277; illustrated.

This book is the fourth of the series published under the title of "Uncle Robert's Geography," and edited by the late Francis W. Parker. Uncle Robert takes two of his nephews on an extended geographic field trip to study the Wisconsin River. They secure a small boat at Wausau, Wis., and with a camping outfit start downstream. On the way the boys discover and solve many problems associated with the work of rivers and with the history of the particular valley through which they are passing. The field trip continues to the famous "Dalles" of the Wisconsin River, near Kilbourne City. From the educational standpoint the field trip is well planned and conducted. The account of the journey is given as a narrative and reported through the conversations which were held on the journey. The book will be of value not only in connection with school work, but also for general reading for young people.

W. W. ATWOOD.

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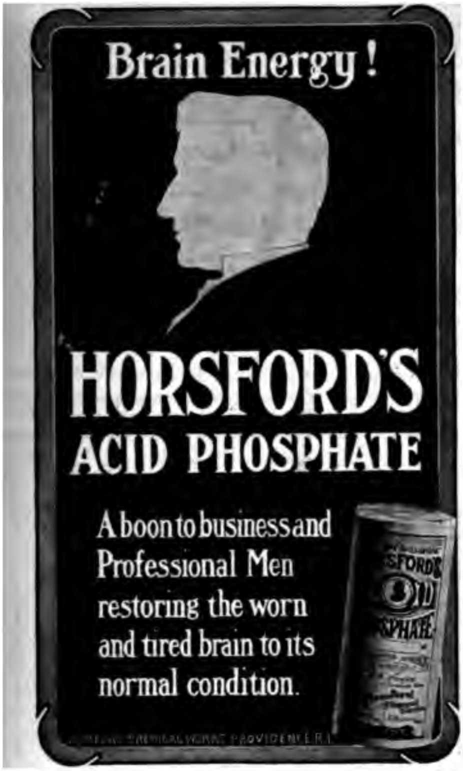

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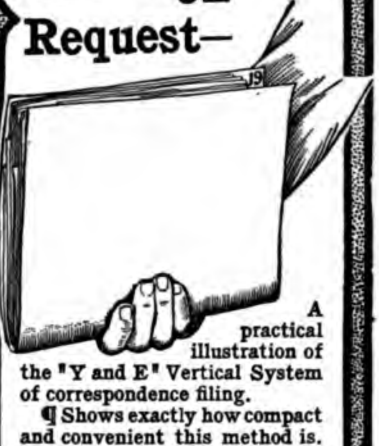

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CONTENTS FOR MARCH, 1905

A STUDY IN THEORIES OF ART - - - - - - - - - - S. B. ALLISON 385

THE SCHOOL AT ABBOTSHOLME, CONDUCTED BY DR. CECIL REDDIE, II PATRICK GEDDES 396

NATURE-STUDIES WITH BIRDS FOR THE ELEMENTARY SCHOOL ROBERT W. HEGNER 408

COMMON-SENSE INTERPRETATIONS OF SHAKSPERE - - EDWIN W. CHUBB 420

A PLAN FOR A VACATION SCHOOL IN CONNECTION WITH THE SCHOOL OF EDUCATION - - - - - - - - - - - - MRS. CAROLINE M. HILL 428

EXTRACTS FROM THE LAST REPORT OF THE SUPERINTENDENT OF THE CHICAGO VACATION SCHOOLS - - - - - MRS. I. S. BLACKWELDER 432

EDITORIAL NOTES - - - - - - - - - - - - WILBUR S. JACKMAN 439

Teachers' Federation and Labor-Unionism; Points at Issue; An Innovation in Education; Freedom of the Teacher; Teachers Should Have a Voice; Effect of No Organization; The Tide Turns; Effects of Victory; Moral Effect; The Present Discussion; Teachers and Labor Unions; The Real Cause of Opposition; Scope of the Teacher's Influence; Teachers Under Suspicion; Danger of Cliques; Character the Anchorage; Teachers as Weaklings; Teachers Not to be Self-Deceived; Work and Culture; Define the Functions.

BOOK REVIEWS - 447

Foster: Elementary Woodworking, ANNETTE BUTLER; *Eggleston:* New Century History of the United States; Western Educational Helps: *J. J. Duvall:* No. 1: Civil Government Simplified; *J. W. Graham:* No. 2: An Aid in the Study and Teaching of "Lady of the Lake," "Evangeline," and "Merchant of Venice"; *W. C. Doub:* No. 3: Grammar by the Inductive Method; *W. C. Doub:* No. 4: Topical Discussion of Geography; *J. W. Graham:* No. 5: An Aid in the Study and Teaching of "Snow-Bound" and "The Vision of Sir Launfal," with Complete Text of the Latter.

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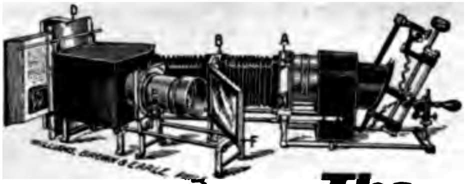

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22. Physiological Effects of Ions. II.
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THE ELEMENTARY SCHOOL TEACHER

MARCH, 1905

A STUDY IN THEORIES OF ART

S. B. ALLISON
Principal of the Walsh School, Chicago

Theories of art can be conveniently grouped about the different forms in which the art problem has presented itself at different times to the investigator.

I

The first form the question assumed in modern times was: What is the nature or essence of art? This was put from the metaphysical standpoint common to the age. The problem was to determine the relation of art to the reality of things. There must be some peculiar property or quality in art that makes it what it is. As this was commonly agreed to be beauty, the question resolved itself into an inquiry into the relation of beauty to the entity supposed to constitute the reality of things. The method used was analytic and discursive, and therefore subjective.

One answer to the question from this point of view may be called the *intellectual theory of art*. Art is constituted as such by its embodiment of an idea. It must be representative of a thought. It must body forth the underlying unity of things. The beauty of the absolute shining through the media of representation constitutes the art object as such.

Beauty on this theory is an inherent and absolute quality of things. "Beauty," says Schiller, "is the infinite represented in finite form." "Beauty," says Hegel, "is the ideal as it shows itself to the senses."

This intellectual theory received its highest development with Hegel. It still very largely dominates the educated thought of the day.

This theory is entirely speculative. It has no support in psychological or sociological investigation. It is independent of any adequate notion of beauty. It would be impossible to square such a theory of art with evolutionary science, or to justify it as a sociological function. We have but to attempt to apply such a theory of art to the explanation of the art of primitive or savage people to see how inadequate it is to account for the facts.

Over against this high idea of art, but of the same objective character, a second theory stands out. Beauty is the essence of art, and beauty is that which pleases. Beauty is still thought of as something inherent in the object. Little, if any, distinction is made between beauty and the agreeable. To be such, an art object must please. The difficulty with this theory is that it fails to make distinction between the agreeable and the beautiful or separate art from the objects of personal satisfaction, such as well-cooked food or good clothes.

II

A second fundamental question that may be asked about art is: What is the origin, nature, and relation of the art impulse? This is the form the art problem has assumed for the more modern scientific investigation. As opposed to the metaphysical methods of the older attack, this form seeks its answer in the realms of psychology and history. So far as art is connected with the beautiful or with æsthetics, this putting of the question and the method of its solution involves them all. If we could find some underlying uniform principle of such scope as to include all the phenomena in its comprehensive grasp, the riddle — such is the thought — would be in a fair way of solution. If such a principle or impulse derived from psychology were fortified by application to the explanation of all forms of art among all peoples at all times, then the problem would be such no longer.

The older investigators were satisfied to analyze and describe; to spin theories of mere speculative threads. In sharp contrast to such proceedings, we have, under the second aspect of the question, the application of scientific methods to the art problem.

The question of the art impulse, or why we create and enjoy art, has been answered in various ways by different investigators. These answers may be grouped under five heads, including, for the sake of completeness, the views of Plato and Aristotle:

1. Plato held that art and the play impulse are identical. Art is a kind of play. Art is the play of the adult. There is a surplus of energy. This overflows into play, and later takes the form of art. This theory remained dormant until taken up by Schiller (1790). It was given scientific form by Spencer and others.

2. Aristotle held that imitation is the fundamental form of the art impulse. Man produces art because of the instinct to imitate or reproduce his surroundings.

3. Darwin traces the art impulse to the instinct of animals in attracting mates. It has its origin and development in sexual selection.

4. Attempt has been made to connect the art impulse with the "showing off" instinct of children.

5. The emotional theory of art holds that every feeling-state seeks adequate expression. A pleasant feeling-state is reinforced or enhanced by such expression; a painful one is inhibited or relieved. A sort of circular reaction is set up. Motor expression relieves the feeling-tension at the same time it heightens the original state. The entire organism is thus put in an enhanced state of efficiency which can be turned to account in practical ways. Of course, art is not the mere expression of feeling. But this theory holds that in this circular reaction set up by the manifestation of feeling we have the original form of the art impulse.

This empty form must get a material from the social life, and utter itself therein according to æsthetic principle, to be art.

The identification of art and play is a very seductive view. They have much in common. They seem to go on for their own sakes. They no doubt have reciprocal influence. But play ends in itself. Art is concerned with a product. However close the two activities may be traced to an identical impulse, they have separate lines of development. Originally, before the development of specific lines of cleavage in the social life, they no doubt formed parts of the one action-continuum, so to speak. But in modern civilized life, art and play are certainly distinct in their impulsion.

Art no doubt is quite largely dependent on imitation. There is an instinctive tendency to imitate. We attempt to make the world a part of our experience by imitating, sometimes in a very subtle way, not only our social, but also our natural surroundings. There is an impulse to imitate whatever moves or engages attention. Many of the arts are directly imitative; witness painting, poetry, and sculpture. But a crucial fact is that not all the arts are to be explained on this principle. Architecture and music are not imitative, unless music is considered an imitation of the voice. Nor does the imitation theory do justice to the other factor in art — the creative. It is the common agreement that creation is a necessary element in art.

Darwin's connection of the art impulse with sexual selection presupposed a highly developed æsthetic judgment in the mate that does the selecting. It is well known that the male bird makes a great display of his fine plumage before the female. But to suppose that she compares the general or particular effect of the fine points in the plumage of her different suitors, and thus reaches a conclusion, is to endow the female bird with an intelligence which certainly on other grounds we are obliged to deny her.

There is always something personal in art, something of self-exhibition. There is certainly an instinct to attract notice, to desire the approbation of our fellows. But this is hardly sufficient ground upon which to base a theory of art.

There is left the emotional theory to account for the origin of art. It seems best to answer the demands of such a fundamental theory. It is not necessarily antagonistic to the others, but includes them as aids. It seems to synthesize the whole field. Art thereby is connected with a universal life-principle, and is thus given an importance that its universal distribution necessitates.

The expression of an emotional state heightens or relieves that state. When the expression is in such form that others share in the feeling, there is double enhancement or double relief. Hence the universal impulse to seek relief in sorrow through sympathy, and the heightening of joy through sharing it.

This theory is ably advocated by the two most recent writers on art — Tolstoy and Hirn. Tolstoy's book is *What is Art?* Hirn's, *The Origins of Art.*

III

A third basic question concerning art is the one that best fits in with the most recent currents of thought. It is: What is its use or function in the social life? This is the form the discussion has assumed in those circles interested in social amelioration. Led by Carlyle, Morris, Ruskin, Crane, and others, this way of looking at art supports the arts-and-crafts movement, or the movement toward the revival of artistic handiwork.

From this standpoint art must justify itself as a utilitarian factor in social life. It must be shown how art furthers the life-process. It would indeed be a startling anomaly if art, which absorbs such an immense amount of human energy, cannot be shown to be of practical value. If it had no social value, people producing it must long ago have been weeded out by natural selection. From the fact of its universal distribution among all people, in all times, the presupposition is that art must serve some important purpose in the community life. The problem is to discover it. It is no longer a question as to the metaphysical nature of art, nor wholly of the nature of the art impulse. Art theory must be stated in social terms.

The investigators along this line can be divided into two groups: (1) those who approach the problem from an ethical point of view, and (2) those who bring scientific methods to the solution of the question.

Among the first group are Ruskin, Morris, and Tolstoy. They find the answer concerning the social significance of art by emphasizing its moral or ethical aspect. They find the main social function in its raising and dignifying the character of labor. They deplore the decay of art consequent on the division of labor and the increasing use of machine-made goods.

They point to the "sweetening" effect of art on labor. It transforms into creative activity, and thus raises and ennobles the work and the worker, and enriches his life. Every hand-worker should be an artist, they claim. This is the only means of keeping work above depressing drudgery. Thus they advocate a reunion of art and craft. Hand-made goods are to be encouraged, not only because of their individuality, and therefore heightened artistic value, but because of the ennobling effect on the worker of creative artistic activity.

Tolstoy lays great stress on art as a language of the feelings. The social significance of art lies in being an instrument for the conveyance of feeling. Just as words convey intelligence, so art is the means of the transmission of feelings. Art harmonizes the feelings. Just as language tends to make people think alike, so art ends in socializing feelings, in unifying the emotional life of a people. Says Tolstoy: "Art is a human activity consisting in this, that one man consciously by means of external signs hands to others feelings he has lived through, and that others are infected by these feelings and also experience them."

The second group of investigators of art from the social point of view have approached the problem from the province of anthropology. They have treated art genetically from an evolutionary departure. They attempt a theory of art from the study of its occurrence among primitive and savage people. Art is set forth in historical perspective.

The result has been startling in its effects on art theories. The main conclusion arrived at is that no form of art has had a purely æsthetic origin. All art in the beginning has served foreign purposes. That is, art in its beginning was not its own end, but all objects that now appear to us as produced as art were originally for some utilitarian purpose, or supposedly so.

Art from this point of view can hardly be comprehended in a definition. The following is a summary of the main facts and conclusions of the more recent scientific study of the social side of art:

1. *Art activity* is a common trait of all tribes and peoples. That is, there is a common art impulse or impulses. This argues

that every individual is endowed with an instinct to produce or enjoy art.

2. *Art, as we know and experience it,* is a product of highly civilized people and of highly specialized conditions, and has, therefore, pretty much the characteristics with which it started. It had a far other import and function in primitive life than among the highly civilized nations.

3. *Art defined as activity in conformity with æsthetic values* has been a gradual growth and development from non-æsthetic activities. That is, no form of art has had a purely æsthetic origin with the possible exception of music. All forms of art at first served some useful function. Tattooing was primarily connected with clan, group, and tribe marking, and with rendering one terrible to enemies in war. The graphic arts have grown up through pictographs and ideagrams, whose purpose was the transmission of information, to representation controlled entirely by æsthetic ends, as in modern painting. Ornamentation was at first marks of ownership, magic or religious symbol. Dancing had its utilitarian aspect in inciting to war, or in the imitation of animals as a magic to entice them within a hunting distance. Poetry, epic and dramatic, had its origin in the celebration of hunting and war adventures and their heroes.

4. *Art and the beautiful.*—While every form of art can be traced to some utilitarian motive, in whole or in part, in its origin, yet these activities were not wholly divorced from æsthetic values. There are certain psychological and physiological principles that controlled the form which these social activities took on. These are the æsthetic value or laws of the beautiful. Æsthetic value is value for the organism in lower forms of feeling at first. Ideal or associative or intellectual value is a product of higher levels, or at least reaches strength later in the history of the race. It is pretty certain that beauty of form is related to ease of adjustment of the muscular apparatus of the eye. Color has also a psychophysical value, while rhythm, the basis of the agreeable in music, has obvious relation to certain bodily functional rhythm. Symmetry and repetition may have also a somatic reference. As the most pleasing interval in music was earlier the

octave, so the most pleasing form was the symmetrical. These simple psychophysical requirements gave form to activities and products whose aim was not simply the realization of these laws but which had their purpose in the practical affairs of a rude and strenuous living. As civilization and wealth increased, production was more and more controlled by these subjective laws, rather than by the really objective utilitarian conditions. The whole field of industry has yielded somewhat to the sway of æsthetic principle. There is nothing produced without some reference to its appearance from the point of view of art.

Beauty, then, is really subjective and relative. It is not a quality of things, as regarded by the older metaphysical theories of art. "Beauty is our pleasurable feeling, projected as qualities of things." These feelings, of course, include what are sometimes called our higher and lower feelings. There is spiritual beauty as well as beauty of form, color, and rhythm. That is an ideal or intellectual beauty—a beauty of relations, which form and color serve only to manifest. And with many persons this is the only art value—the meaning, associative, or content value as opposed to the sensuous values. These two kinds of art values are present in every work of art, but in varying degrees. In the art of primitive men and among rude people the sensuous side of art is emphasized. Among cultured people art becomes more and more refined, symbolic, and ideal.

It will be seen how far such a view of beauty is from the older metaphysical one which regarded it as objectively inherent in things. Beauty, too, so far from being the essence of art, is rather a by-product, a form which all activity takes on, when free from external constraint. Thus a comprehensive definition of art—such a one as would cover the activity at all levels of development—could not make beauty its essential quality. So we have such definitions of art as Sully's, Tolstoy's, and Hirn's, wherein no mention is made of beauty.

The field of beauty is not coincident with art. The appreciation of natural beauty, aside from color effects, is of very recent growth and is largely associative or ideal; and so is an activity of the adult consciousness. Children enjoy nature from the psychophysical plane. Their art is naïve and simple. Associative or ideal value with them is at a minimum. Therefore, the attempt to teach nature-study from a refined æsthetic point of view is largely abortive.

5. *Stages of development in art.*— Art may be defined from the psychological side as production in accord with æsthetic principles or values, and in its most refined and specialized forms, as in painting and sculpture, it may be considered as production whose objects have emancipated themselves from all economic utility and exist as ends in themselves. But this significance is for adult consciousness and for the highest levels of development only. Neither the conscious production in the interests wholly of æsthetic values, nor production of objects independent of utility, is characteristic of art in its earlier phases, nor for children in the elementary schools.

Art has passed through at least three stages of development, and happily a record of at least two of these stages lies imbedded in the language. If we trace the etymological history of the word "art," we find that the use of the word as confined to certain narrow and specialized lines is a recent one. In the Middle Ages art had no such specialized meaning. It included all that we now mean by the words "artist" and "artisan." Workers were not divided into artists and artisans, nor work into art and employment. The great artists of the golden age of art were artisans as well. All production was under the conscious sway of æsthetic values. But little of it was entirely independent of foreign purposes. The world's great paintings are mural decorations; its great sculptures are adjuncts of architecture. The easel picture is a recent development. It is a question whether art has won or lost in power and influence by setting up on its own account. The presence in the word "art" of the root *ar* points to a still wider use of the word, wherein is included all production requiring skill. This seems to indicate a still earlier undifferentiated condition of production wherein there was little division of labor, but an all-around individual capability. Every man was his own artist. As in the preceding stages, art and utility went hand in hand. This manifold capability constituted a sort of action-continuum out of which the later highly specialized conditions have come. It was only gradually, and after a long course of development, that the word came to mean distinctively conscious productions in strict accord with æsthetic laws; and only gradually, and after a shorter time, that it came to signify autotelic production, or production whose end is in itself.

The three stages of development, then, are: (1) An early undifferentiated condition, before there was any great development of commerce or manufacture, wherein each individual took part in some form of artistic production. In the story of Caedmon we have a social condition depicted where each member of the social gathering was supposed capable of extemporizing both words and music. (2) A stage that is distinguished by the universal and conscious application of æsthetic principles to production. This was the golden age of modern art. It was the period of the production of the great European church edifices, the period of the identity of artist and artisan. (3) A final stage now characterizes our own age. Art has come to be narrowed and limited in its significance to the so-called fine arts, which in the narrowest usage include painting and sculpture. There is complete divorce from any but æsthetic considerations. These art objects are an end-all in themselves. They exist for purely æsthetic contemplation. They are autotelic.

6. *The autotelic aspect of art.*—It is the universal agreement among art writers of the nonscientific school that art is not art unless it is purely in the interest of beauty. Foreign purposes must not come in. The product must proceed with an eye single to the æsthetic value. This position has reacted on the art-work in the school, and limited it largely to pictorial art, to the neglect of ornamentation or the applied arts. The theory in question has operated to put a sort of social ban on decorative arts. Picture-making conformed best to art defined as the object which existed for its own sake.

Much might be said against making this a universal criterion of art. It leaves out of the category the art of primitive men and decorative art. Indeed, were it applied strictly, there would be little art left. An investigation into the motives of artists would, no doubt, find many motives urging to activity besides the purely æsthetic one. But, as a recent writer remarks, "it is as impossible to explain away the artistic purpose as it is to detect it in a pure state in any concrete work of art." To use it as a universal criterion of art is destructive, and yet it seems a necessary element.

This puzzle has a flood of light thrown upon it by the genetic studies in the history of art, as above sketched. It is seen that such a criterion cannot be applied at all levels of development. Art has struggled up in the fetters of utility. It has been the servant of social needs. It is only after a severe apprenticeship that it has become free and ready to produce in its own name.

The autotelic criterion is an ideal toward which art production has been making through all the centuries. The ideal of pure art production has not yet been attained. It is for the future to realize. Such an ideal can become operative only in a society on a higher ethical and economic plane than ours.

With the authority of this dictum undermined, art in the schoolroom has a different aspect. One need no longer be afraid to call the art-work of children art. It is art, though its motive may not be pure or its technique beyond criticism. Such crude impulse and endeavor are and have been a necessary stage in the growth of autotelic art. Of course, the time comes when the child becomes conscious of ideals and æsthetic values, and is ready for pure art production. But unless he has had abundant exercise throughout his naïve period, this very consciousness of æsthetic ideals is fatal to his further æsthetic production.

THE SCHOOL AT ABBOTSHOLME, CONDUCTED BY DR. CECIL REDDIE

PATRICK GEDDES
Edinburgh

II

Leaving now my narrative, and passing to a more general and critical standpoint, in which specific subjects of education, criticism of their teaching, the work of particular classes and boys, have all to be considered, and as regards which critical and constructive suggestions may be made, I may best continue as I have begun, treating, that is, first of all the essential co-ordination of the studies in the school life, next the detail of practical education such as is given during afternoon school, with its workshop and outdoor occupations, and finally passing to criticism of particular classes and the subject-matter of ordinary school work. Thus, instead of beginning conventionally with an inquiry as to how far the school prepares for professions and universities, or rather for the examinations which bring these within the school horizon, we shall begin by asking how far the school adequately prepares for life.

The idea of the school as a preparation for life, and even that of the school as a miniature state in which the responsibilities of the larger world are prepared for, is, of course, one of the oldest and most familiar of educational ideas and ideals. Not only so far as my experience of schools goes, but, indeed, so far as a somewhat varied and extended range of travel and reading allows me to speak, I believe the large claim of this school is substantially justified; namely, that it is carrying out the organization at once of the school environment, and of its whole school life, in some ways at least, more comprehensively and thoroughly than heretofore. A school-state on these lines is necessarily patriarchal in its spirit and organization; and by thus uniting both the material and moral authority in its single head, a fuller unity of their influence is possible. In this way conduct, in both its aspects, objective and subjective, material and ideal, is seen as one; and the separation of these, so lamentably common in our adult life, into morals and economics, into ideal and practice, into the doctrines of Sunday and of Saturday, of church and world, is thus vigorously combated.

There is, undoubtedly, much in the claim of many of the public schools in England, past and present, to have created or maintained large elements of moral and of political idealism; but it appears to me to be a notable distinction of Abbotsholme that it holds these with clearer grasp and carries them into fuller detail than I know of elsewhere. The management of the school-state in all its working and organization is frankly laid bare, so that the practical administration, and the growth and amendment of legislation, are shown plainly in progress together, while the large element of personal authority, common to every type of school life, is here presented in unusual degree in rational relation to science; surely a wise way of strengthening it, and one far too little utilized. As very notable and valuable in this respect, I took note of the headmaster's systematic teaching of hygiene and economics, proceeding as these do from the best elements of "oriental sanitation" in the earth cabinets to the experimental preparation for active citizenship and public life, while avoiding that premature exposition of economic facts and theories, public duties or rights, by which textbooks and their users so often defeat their ends by provoking distaste, or at least indifference. While, again, it must be recognized, as the historic distinction of the best boarding-schools, that they have faced, or at any rate attempted to face, the problems of personal morals more fully and boldly than has yet been customary in day schools or in the home, I have not known of any school in which the moral difficulties of the great and decisive transition from boyhood toward virility are so frankly, simply, and sensibly met. As I write, I have before me for review what I take to be the most important work on education which has appeared (in the English language, at least) for many years — President Stanley Hall's *Adolescence,*[1] a work which neither schoolmaster nor professor, physician nor parent can afford to ignore; nay, which is fundamental to all who are interested in the practical questions of race-improvement or degeneracy, with their significance to the individual and the family, the community and the state. And I may safely say that, setting this great monograph, with its wealth of psychological and pedagogic science and theory, on the one hand, and this school practice on the other, the two are in the most remarkable agreement; and this, not only as regards the general treatment of most of those aspects of the question, which the lengthy title of the volumes indicates, but even as regards much of their detailed treatment also. I consider this anticipation, in everyday practice, of the highest counsels of pedagogic science a matter upon which all concerned with Abbotsholme may be justly congratulated, and as furnishing perhaps the best possible justification of its founder's initiative.

Of the curriculum in its largest aspect — i. e., as stretching over the seven years from eleven to eighteen inclusive — I do not feel qualified to speak to much purpose; and to go fully into all matters of school organization — such, for instance, as the grouping of the boys into "prefects," "mids," and "fags," or, again, as the excellent entrance scholarship scheme — is beyond my present scope.

Returning to the detail of the education for practical life, and beginning with its most fundamental occupation, I have already mentioned what I saw of the farm work, and have few suggestions to offer. I safely expect that, as the school develops, a fuller agricultural experience may become possible, with further practical opportunities, as of the admirable, steady discipline of the plow, in some ways the truest form of drill yet devised. I am far from any suggestion of transforming a school into an agricultural college, but there is no danger of this in an increasing development of the farm environment, which is one peculiarly rich in educative opportunities.

In forestry I was glad to learn that a septennial felling, of course followed by corresponding planting, has been arranged for, so as to give to each crop of boys, as far as possible, practical experience of this, the full curriculum being adapted for a stay of seven years.

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[1] Stanley Hall, *Adolescence* (New York and London: Appleton, 1904); 2 vols.

Practical bee-keeping was evidently well done, and with active and healthy interest among the boys; and here I need only suggest a somewhat fuller correlation with entomology and zoölogy. It is easy and delightful to make and keep ants' nests; and these, with an occasional lesson upon the kindred gall-insects, would furnish a convenient introduction to insect lore, and indeed to biology in general.

Of the workshop I have already spoken appreciatively; and I was similarly impressed by the faithful way in which the pumping engine is attended to by its couple of young engineers. As regards workshop drawings, I was glad to see useful beginnings of correlation with the drawing-school.

Architecture, I was gratified to learn, had naturally had a great place while building operations were going on. Open-air sketching I was glad to see in progress, and in photography I saw an exercise, with, I think, fair results.

As already indicated, the printing department appeared to me worthy of special commendation, as turning out workmanship of which no printing-house need be ashamed.

The masters and the elder boys have each their special libraries, as have also the younger boys; even this junior library is managed again by themselves; and I noted with satisfaction their card catalogue. The library, however, appeared to me one of the departments in which both weeding and increase are desirable. Chambers' *Encyclopædia* was on the schoolroom shelves, its volumes showing, however, too little signs of active use.

In summary, then, the various practical occupations of afternoon school have impressed me very favorably; they are remarkably free from trifling, or even from mere amateurism, and have got beyond that phase of mere recreative hobbies, at best to be tolerated, as in most schools, and have fairly entered upon the higher level of serious elements in educational work, and even of valuable aids toward that finding of life-occupations, that choice of professions, which has long been so much a want in all our schools. On inquiry as to this, I ascertained that in past years many boys have thus found their occupations, and have passed direct from the school to the offices of architects and land agents, to workshops of engineers, shipbuilders, or the like. Here again the school work is justified by President Stanley Hall's weighty chapter on "Motor Education."

Coming now to artistic elements of culture, I have already spoken of the large musical development which is so characteristic of this school. As regards the visible arts, good casts, engravings, and photographs are in evidence, and these are regarded as but the nucleus of a school collection which is spreading throughout the corridors and classrooms, dining-hall, and chapel, thus further unifying and refining the whole indoor environment.

The exhibition of drawings contained some drawings and water-colors of distinct ability, and many of fair ordinary skill; yet I am doubtless only expressing the ideal of Abbotsholme in hoping that it may some day be possible to add to the staff an artist who would divide his time between the original production of permanent decorations (it might be even with the help of picked assistants from among the more artistic boys) and a measure of supervision and aid in the teaching of drawing, indeed in its general direction. It is only in such ways that the prevalent "drawing-master theory" of art, which has so long been almost universal in our schools, can become replaced by the true artist's view, that in which drawing is understood, not as skill in copying, even from nature, but as power of individual expression. It must be acknowledged that such a combination of artist and teacher will not be easy to find. In this connection, however, I was interested to note that one youth of marked artistic ability was permitted to devote a moderate portion of his time to the preparation of designs for various publications, on the excellent ground that, though he may thereby take a less distinguished place in some of the classes and examinations, he is thus more fully preparing himself for his opening future.

Such due, yet moderate, encouragment of a boy's special bent seemed to me a very satisfactory evidence of elasticity in the school program, and of a wise encouragement of individual abilities without undue sacrifice of general culture. Another of the most eminent of American psychologists and teachers, Professor William James, has lately insisted even in the interest of that all-around development, at which the best schools must ever aim, of much tolerance — indeed, even, as far as may be, of wise encouragement — of those outbursts of intense activity in this or that direction, since, despite the transient interest and the small outward result, these temporary specializings which so commonly disappoint pedagogue and parent, and, it may be, the boy himself, may not only express some new development of the mind, but even be essential to it. Here, again, we find practice justified by scientific theory, and theory encouraging still greater freedom in practice.

This education of practical activity and experience must be judged in relation to the needs of our national industry, and I am convinced that this school has already amply justified many of the large hopes of its ambitious program. Hence, as the current American practice gains ground in this country — that of employers seeking and selecting for themselves in schools and colleges youths of suitable character, aptitude, and training for their special needs — there is no fear of Abbotsholme not taking a high place; indeed, I should expect a conspicuously leading one.

III

What, now, of special scientific studies? What of mathematical training? What of linguistic equipment for practical life? And what of preparation for the universities? In this connection it has been from the outset of the very essence of Abbotsholme boldly to abandon the tradition so common in schools, that of sacrificing preparation for life to that for the universities. It avowedly tends in quite the opposite direction, and seeks to subordinate all else to the preparation for a completer manhood and a more active career; and this order, as it is only just, I am following in the present report. Undeniably it is on this side that both the more and the less friendly critics of the school have most to say; and I have, therefore, gone over class notebooks and examination papers, and inquired into the teaching, as fully as my time allowed. Since the curriculum begins, in my opinion rightly, with everyday life, in the open air, and in immediate contact with nature around, and not with grammars nor with textbooks — as the respective advocates of "classical sides" and even of "modern sides" have so long inclined — it is with geography that my observations and criticisms must begin. And here, while at once approving the general methods, and recognizing also an unusual measure of common-sense grasp and appreciation on the part of the boys, which here, as in their other subjects, saves them from committing the "howlers" too common in conventional schools or colleges, where detailed class drill and book-work outrun elementary comprehension, I must yet express a certain disappointment as to the work in detail. Thus the map-drawing in the examination papers was inadequate, nor did the classwork show sufficient preparation in this. I would strongly urge, therefore — especially here at Abbotsholme, where so much weight is justly attached to first-hand knowledge of environment — that this should be related much more completely to outdoor regional survey; and also indoors, as already in so many schools, and especially the better American ones, to the habit of making relief models in sand, clay, plasticine, or the like. The immediate surroundings would become more precisely related in each boy's mind to the larger maps of the region, and those of the British Isles, than appears as yet to be the case. Good methods have been taught; thus, the boys have some idea of finding the direction by help of the sun and the watch, or the meridian by the shadow of an upright pole; yet these have not become sufficiently familiar.

Coming now to the more intensive study of nature, as analyzed out into sciences, I was disappointed to find even in Abbotsholme too much of the conventional disproportion between the time and attention given to the chemical and physical sciences and that afforded to biology. I note with satisfaction the existence of biological laboratories upon the plan of the new buildings next to be undertaken, since work in these not only will be educative in itself, but will be found to afford, as the history of science shows, a preparation of very great helpfulness for chemical, physical, and even for mathematical studies.

The chemical teaching of the juniors at least does, indeed, wisely include an element of biology; thus, instead of the conventional exclusion of organic by inorganic chemistry, the youngest boys satisfactorily answered a question about the souring of milk, showing that due beginnings were here being made for the ideas of bacteriology and physiology, nowadays so indispensable.

In mathematics the school was unequal, the juniors appearing at present the best taught, but the older boys not showing sufficient progress for their age.

Much may be done upon the characteristic lines of Abbotsholme, notably by the fuller development and utilization of those mathematical experiences which may be derived from the environment, and acquired or applied in practical and constructive work of many sorts; yet I think this is a point on which a certain increase of working time may be found necessary. Rightly, however, aiming at better quality, rather than mere quantity, of work, the temporary aid of an eminent mathematical teacher—indeed, teacher of teachers—has been lately brought in, and his help and suggestiveness have been appreciated by all concerned. Here, in fact, as in other respects, it is only just to recognize that the headmaster, far from waiting for external criticism, has independently anticipated it, and taken active measures accordingly.

I now leave the naturalistic for the humanistic side of the school studies. The teaching of history is admirably set forth on the school program, starting again from the immediate environment, with its advantages at once as Roman camp and mediæval abbey; indeed, with prehistoric remains and modern industries alike within reach of a day's cycle run.

In all the sets the history was fair, and for the older boys in Roman, as well as English, history. More interest might, however, be awakened; and the use of historical charts on the "space-for-time" principle, which in former years were successfully employed, might be revived with advantage.[2] Of the panoramic and dramatic teaching of history I have said a word among my notes on French below, but I would fain say a word for the fuller utilization of the impulse of Sir Walter Scott, whose tales have awakened even the greatest European historians.

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[2] **Note by the headmaster: I think I ought to say that the best of our historical charts, copied many years ago by various boys from those lent us by Pro-**

In English, grammar was uniformly fair, indeed, often thoroughly intelligent. Excellent tabular and comparative methods of parsing and analysis were being employed in all classes. Essays were especially good where they touched the realities of life. Thus the boys wrote essays warmly and enthusiastically on subjects like "The School Life and its Future," "The Haymaking," or "The Coming Holidays;" but in essays on the merits of authors, like De Quincey and Macaulay, their style was more cold, and did not show sufficient first-hand acquaintance with the books mentioned. A larger impulse to general reading is here urgently to be desired, as of course in modern schools generally, and in no other way can a boy more easily yet effectively help on his own education. I note the institution of a "term-book," an excellent beginning, but look forward to the further development and use of the school library.

In modern languages our British insularity is not yet adequately cured, even at Abbotsholme, despite its large proportion of foreign masters. As our schools go, it is undoubtedly much to have realized that modern languages are real studies; and I observed the class teaching both of French and German sufficiently often to be very favorably impressed by the methods employed.

Coming to the teaching of French history, Joan of Arc is already presented to the juniors in what is probably the most beautiful of all picture-books. The History of France has of late similarly gained new vividness to readers of all ages, from the unparalleled illustrations of the volumes of Montorgueil and Job, which will be of no small value and suggestiveness to the teacher of our own history, or that of classical times.

The beginning of an acquaintance with simple French verse

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fessor Geddes, were loaned to him for his exhibit in the Paris Exposition of 1900, but were not returned, having unfortunately been lost, along with Professor Geddes' own, at the close of the Exposition.

and song was being given to the juniors, so that they should easily, and with pleasure, go on thence to songs like the *Chants héroiques,* edited by M. Gaston Paris, thus gaining a fuller sense of the voice of a great nation throughout the ages.

Similarly as regards German. I was glad to hear in chapel Luther's and other historic hymns sung in German; but I press also for use in class of a wide selection from the students' *Commersbuch.* I happen to have been in touch with much of the earliest and the best teaching of phonetics in this country; yet I would urge upon its cultivators that, without neglect of their still mainly analytic methods, none can be more rapid and more practical for correcting our English accent than that of completing thereby the synthetic one — through an enjoyment of poetry and a participation in song.

As to Latin, it is an honorable distinction of Abbotsholme to be leading in this country an important reform in boys' schools by teaching Latin after French, instead of, as too commonly at present, French only after Latin. But for this reason again a higher mastery of French, such as I am convinced may be obtained, would greatly improve the Latin, and thus greatly strengthen and justify the position taken up by the school.

The recent college successes of women in classical studies have largely been due to their education on this very principle (in which Abbotsholme stands so much alone as regards boys), in virtue of which they begin Latin late, and with a competent knowledge of French as well as English; so that in this way the moderately high standard of the entrance examinations of the universities is being met by such girls with only two years of moderate work in Latin, instead of (as in traditional schools) many years of drudgery, sometimes to the exclusion of almost all else.

Despite the long traditions which have fixed the practice of Latin teaching, may not something be done by the methods with which Abbotsholme is so fully identified? I do not, of course, ask for Latin teaching upon the lines of that of spoken languages; yet the beginnings of an incorporation of Latin into the school life which chanting the Graces and the Lord's Prayer in Latin affords, are in themselves excellent. And may not the bridge to Latin from French be strengthened by the help of such admirable French translations as those of Leconte de Lisle? To many boys, English translations of the Latin and Greek classics from Pope to William Morris have been of inestimable literary value, though their linguistic help is necessarily small or doubtful. The more kindred French tongue, used, as in this case, by a scholar who is also a poet, unites the advantages of sympathetic interpretation with those of a textbook of comparative philology, and avoids those of a mere English crib.

So far then my criticisms—disappointing, perhaps, to those who expect scholastic perfection. Yet, while Abbotsholme cannot claim at present to lead in everything, I do not think I should have fewer criticisms to make at more prominent and longer-established schools even in some of the traditional subjects. Critics of Abbotsholme from older points of view may certainly be reminded of the fragility of glass houses, and parents, alarmed to hear that Abbotsholme is not yet perfect, may be reassured to know that all items in the program are substantially begun, and the most urgent matters are well advanced.

I have accompanied my criticisms of the teaching by a few constructive suggestions, not because I presume to speak as an expert in so many subjects, but largely as an answer to the question, which has been once and again pointedly put to me, and doubtless to the school, by parents and others, namely this: Accepting the fact that the school aims primarily at the formation of character, at health and general culture, at preparation for practical life rather than for university distinction, is it necessary, either that a sort of specializing coaching department be established within the school (as in so many others) to prepare for the universities, civil service, etc.; or, still worse, will an average boy, aiming at such a career, be obliged to go to a coach after leaving Abbotsholme at eighteen? To both questions I unhesitatingly answer, No. Neither of these is necessary. Although the school in some subjects is not so fully up to the conventional requirements of the present examination world as are schools which specialize for examinations, I am convinced that all these requirements can, and may soon, be fairly met, not by abandoning any of the principles of the school, but by applying each of them still more fully. I have made it abundantly clear that my appreciation of the school, although in the main favorable, and, indeed, in many respects favorable in the very highest degree, is not uniformly so, since I am insisting that improvements are necessary in not a few particulars; yet I wish, none the less, to congratulate the council, the headmaster and his colleagues, the boys also, upon the large amount of good educational work which has plainly been done, and upon the substantial foundations which have been laid of a great school. The desirability of supporting the head and his staff in strengthening those elements of the curriculum which I have had occasion to criticise, will, I trust, also be obvious.

In the *Educational Atlas,*[8] which tabulates the organization, work, and methods of the school, I find a gradated succession and a rational correlation of the school studies which strikes me as surpassing anything else of this nature I have seen in this country, and as certainly not inferior to the admirable and widely influential programs of the best American and German educationists, who have paid special attention to these questions, upon a due settlement of which, in a complete sequence, progressive instruction so essentially depends. The vast and more urgent work here of the organization of hygienic and practical, social and moral education (each and all of which have so favorably impressed me), is now sufficiently advanced to leave headmaster, staff, and boys alike more free to continue and complete this program in the various particulars which I have indicated, and so win for the school an intellectual position of no less distinguished excellence.

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[8] London: George Allen, 1900.

NATURE-STUDIES WITH BIRDS FOR THE ELEMENTARY SCHOOL

ROBERT W. HEGNER
School of Education

(With photographs from life by the author)

CONTENTS

I. Bird-Houses
II. Bird Charts
III. Bird Day
IV. Arbor Day
V. Bird Protection

The suggestions contained in these articles, which will extend through several numbers of the *Elementary School Teacher,* are meant to help teachers who desire to make bird-study a part of the school work, but have not the necessary subject-matter at hand. Of course, the charts and other suggestions must be adapted to the ability of the group taught.

Every normal child is interested in birds, and it is but an easy task to nourish this interest into a great love for the beautiful creatures that flit about our homes and schools. Bird-study should be carried on throughout the entire year; but its chief field is opened in the spring when most of the birds return from their winter quarters in the South. Plans for receiving these birds should be made in the winter, and when spring comes each new arrival will be hailed with great delight and enthusiasm.

I. BIRD-HOUSES

Many birds make their homes in hollows in trees, fence-posts, and similar places. Where no nesting sites of this kind occur, houses should be made and put up to attract those birds that otherwise would seek homes elsewhere.

Bird-houses should be made of rough weathered lumber and should not be painted. They may be covered with bark, but care must be taken to have the bark tightly fastened to the boards, or it will furnish excellent homes for insect pests. Lumber with the bark left on is extremely useful and makes some of the best houses.

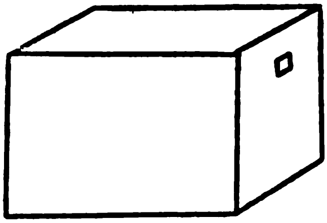
A section of the hollow limb of a tree makes a home most nearly like that which the bird naturally uses. This section should be plugged at both ends and an entrance made in the side. When a hollow limb is not obtainable, a limb may be bored out. Where pottery is taught, excellent houses of clay may be made which will serve admirably for wrens.

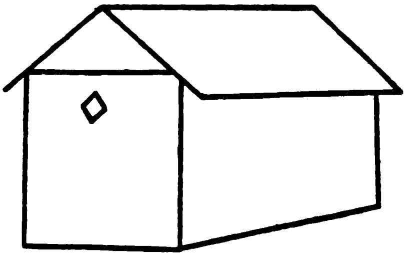
The position of the house is important and should be considered for each bird. The boxes must be well fastened, in a sheltered position, shielded both from the sun and from too close observation. The natural enemies must also be considered, and plans must be made to keep the cats and jays from disturbing the nests. If the house is in a tree or on a post, a little barbed wire coiled around the post about five feet below it will protect it from cats; jays and sparrows cannot get at the nest if there is no perch.

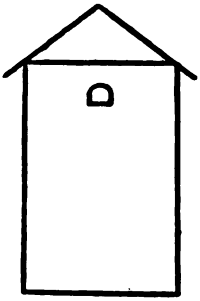
Bird-houses may be placed in suitable positions near the school, or may be taken home by the children. A record of the events which occur around the various bird-houses should be kept on charts which will be described later.

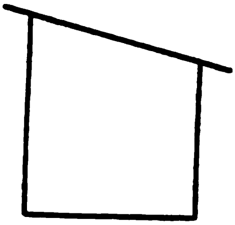
1. *House wren.*—The wren, although a very small bird, can use a relatively large house. It should be about 8 × 6 × 6 inches inside. Near the top of one end an opening 1¼ inches in diameter should be made for the entrance. A perch is not necessary, and is better left off, as it allows the English sparrows and other depredators to get at the contents. The house should be placed in a tree or on the side of a building 7–15 feet from the ground. It is safest when nailed to a building where it is out of reach of cats.

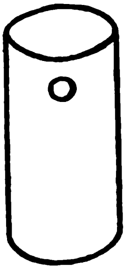
The nest is built with a foundation of twigs and a superstructure of finer vegetable matter. In a hollow in the mass of twigs at the back of the box is constructed the nest proper, which is made of dry grass and lined with horsehair and a few feathers. The wren, when not furnished with a box, nests in cavities in trees, stumps, or fence-posts. Numerous extraordinary nesting sites have been recorded, such as old hats, shoes, coat sleeves, and tin cans. If more than one bird-house is put up, one pair of birds

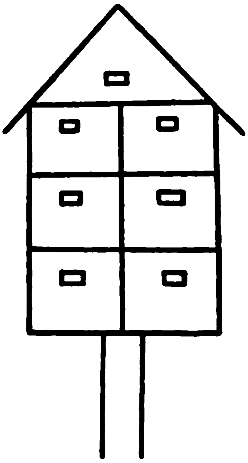












will fill them all with twigs, choosing one of them for raising the young.

The arrival of the wren varies according to latitude. It is first heard in Chicago about April 20. The nest is begun in the middle of May. The eggs number from five to nine, and are profusely marked with fine brown spots. Two broods, and sometimes three, are reared in a season.

2. *Chickadee.*—This little black-capped fellow is almost exactly the size of the wren, but uses a smaller house. A box 3 × 3 × 7 inches inside, with an entrance 1¼ inches in diameter on one side near the top, makes a very acceptable chickadee home. This house should be placed with its long diameter perpendicular to the earth, in a tree or against a building, about 10 feet from the ground.

The chickadee in its natural haunts rears its young in the hollow of a tree. The nest is made of soft moss, a few feathers, and the hairs of different animals. From six to ten eggs are laid —pure white with a reddish tint, and spotted with reddish-brown at the larger end.

Chickadees are with us the entire year. Their nests are built about the first of May, and two broods may be reared in a season.

3. *Bluebird.*—The bluebird is larger than the chickadee and wren, and needs a larger home. Its house should be 10 × 6 × 6 inches inside. The entrance is in one end, from 2 to 2½ inches in diameter. Place the house in a position similar to that of the wren. The top of a post is a favorable site.

The bluebird's natural nesting-place is a hollow in a stump, fence-post, or tree. It often makes use of a tin can lodged in a fence-corner, and is partial to the old deserted nestholes of woodpeckers.

The nest consists of soft grasses. Five light-blue eggs are usually laid, and two or three broods are reared during the nesting-season.

Bluebirds may be looked for about the last of March. They mate about the last week in April. Bird-houses for them should therefore be in place by the end of March. Care must be taken to protect the bluebirds from the English sparrows, which are ever ready to drive out the real owners and appropriate the house.

4. *Purple martin.*—Unlike the other birds mentioned in this article, the martin is sociable and seems to enjoy the company of its fellows. Its house may be built with compartments which will allow several pairs to occupy it at the same time. The compart-

ments should be about 9 × 7 × 7 inches inside. The entrances should be 2½ inches in diameter, near the top of the compartments. Many elaborate and beautiful houses are possible, as the martins are not afraid of homes constructed by human beings. The house should be placed on top of a building or on a tall post.

5. *Screech owl.*— Suitable nesting-places for this bird are not common, and a bird-house, if carefully made, may attract a tenant. It should be 16 × 8 × 8 inches inside, and may have the top left open for an entrance or a hole 4 inches in diameter in one side near the top. Owls do not build nests, but lay their eggs on the rubbish found at the bottom of holes in trees. It would therefore be well to line the house with leaves to tempt any visitors to remain. The sides of the house should be covered with bark to make it resemble the tree in which it is placed.

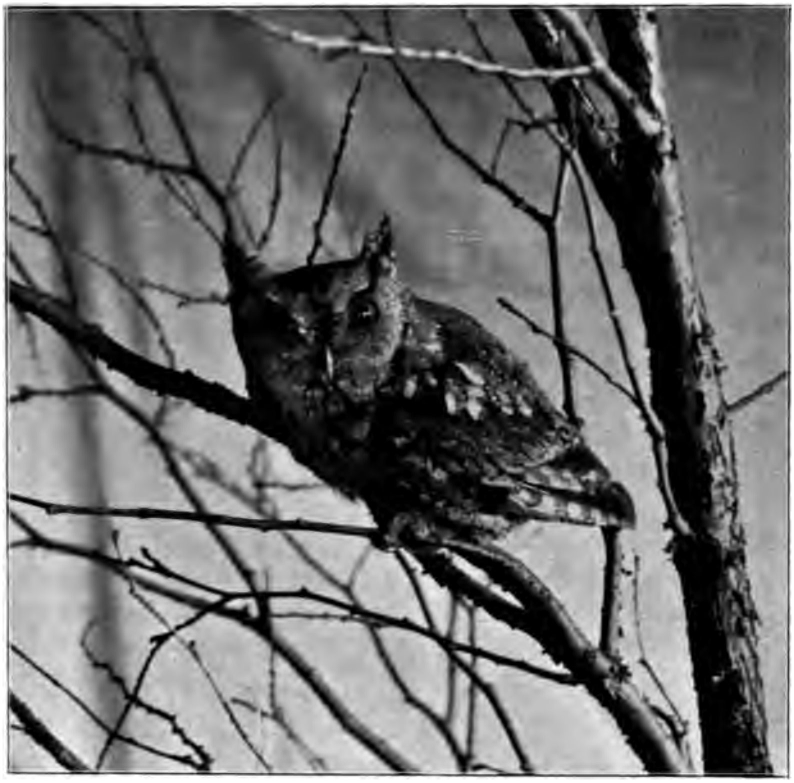
II. BIRD CHARTS

Most children, even before entering school, have made original observations of numerous nature subjects. It is the duty of the teacher to help the pupils arrange these observations so as to make them of permanent value. This is best done by means of charts, a number of which are described below.

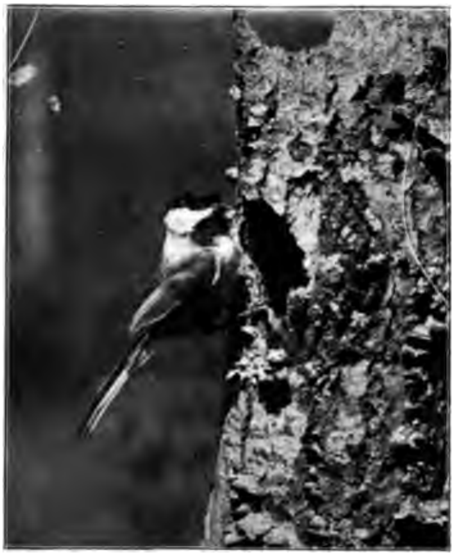
1. *Description chart.*— Before much can be done with the description of a bird, one must have in mind a definite idea of its topography. The accompanying diagram of the principal parts of a bird may be copied on the blackboard, and no difficulty in naming external features will be possible. The description chart is very flexible, and may be made as simple or complete as desired. One answering the needs of all ordinary studies will contain the following points:

DESCRIPTION CHART OF BIRDS

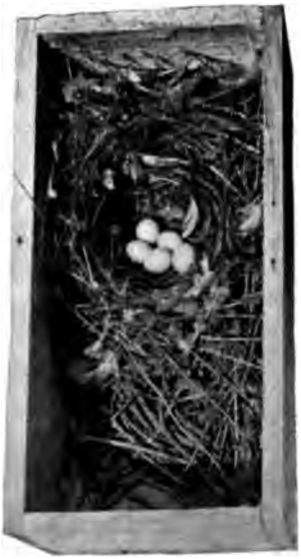
Locality.............................. Date..........................
Common name ....
Scientific name ....
Male, female, or young ....
Comparative size............................ Length..................
Color:
forehead .... crown .... nape ....
back .... rump .... tail ....
abdomen .... breast .... throat ....
wings .... other markings ....



SCREECH OWL



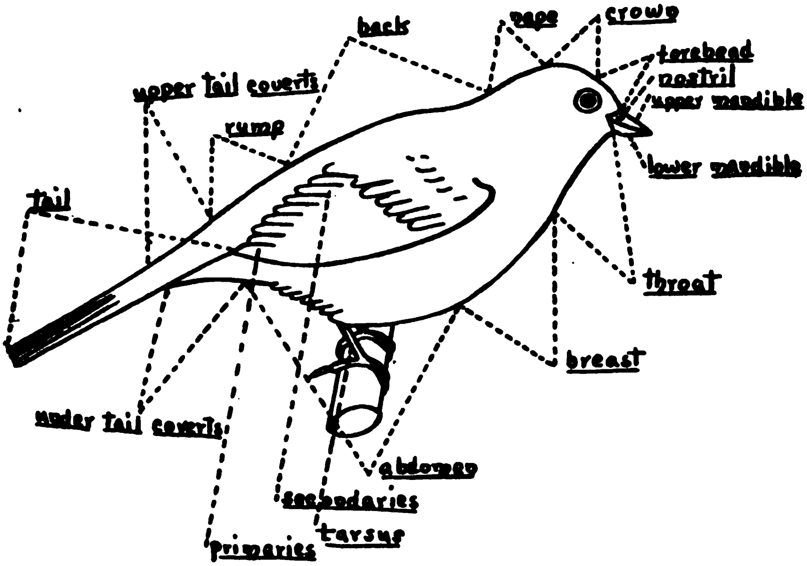
CHICKADEE BRINGING FOOD TO YOUNG IN CAVITY IN BIRCH STUB



NEST OF HOUSE WREN IN BIRD-HOUSE

Features (size, shape, etc.):
body .... **neck** .... **legs** ....
feet .... **head** .... **beak** ....
wings .... **tail** ....

The bird should be compared, first, in size with any common bird known by all the children, e. g., the English sparrow. A study of legs and neck will show how the birds adapt themselves to conditions; for example, the wading birds will be found to have long necks and long legs. The beaks will indicate the kind of food on which the bird lives, or the kind of home it builds. Numberless points of this kind may be brought out as the studies proceed.



2. *Bird calendar.*—Part of the blackboard may be reserved for the bird calendar, which should be begun in the winter. In the various spaces, as shown below, place (1) the name of the bird; (2) when first seen; (3) by whom first seen; (4) whether a permanent resident, summer resident, winter resident, or visitor; and (5) whether common, moderately common, or rare. A few

minutes each day will be found sufficient to get reports of observations and to keep up the interest.

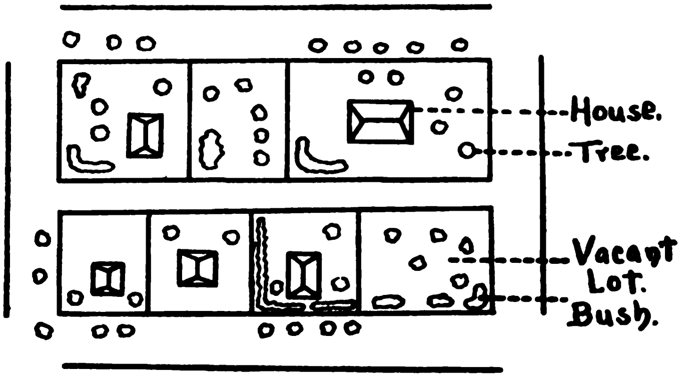
Name	First Seen	By Whom	Resident or Visitor	Common or Rare

BIRD CALENDAR

This chart serves admirably as a list of the birds found in the neighborhood of the school. Children may be impressed with the value of this work if blanks are obtained from the government at Washington, D. C., on which to make their records. These blanks may be had by addressing the United States Department of Agriculture, Division of Ornithology. They are sent out every year to ornithologists all over the United States; and the reports thus obtained are used to plot out the paths of bird migrations.

In connection with the calendar a list of old birds' nests may be made. The number of nests that were overlooked during the summer will surprise everyone. The nests, if collected, may be accurately labeled by referring to a reliable bird-book, and will make valuable museum specimens.

3. *Bird census.*—An idea of the number of birds that are residents may be gained if a bird census is made of a certain chosen piece of territory. A city square on which there are a number of trees and bushes answers the purpose very well. The birds' nests should be searched for diligently on this territory, and a census made each year will show the increase or decrease in resident birds. The census should be aided by a drawing of the square, with each tree and shrub carefully delineated and named, and each nest marked by a color, the color scheme to be described at the bottom of the drawing.



4. *Life-history chart.*—The series of events that go to make up the life-history of a bird should be arranged in logical order, as in the life-history chart.

The data contained in this chart are part of the results of work carried on by the sixth-grade children in the Elementary School of the School of Education during the spring of 1904.

5. *Food chart.*—A knowledge of the kinds and amount of food consumed by birds is of great importance, as few realize their great economic value. Careful observation is necessary, and a field-glass is very useful in determining the nature of the food taken by the birds. A nest of young furnishes the best subject for study, as it is very easy to take up a position near the nest and make a list of the different kinds of material the mother and father feed to their offspring.

The children will be interested in the results that have been arrived at by the men who have had the economic ornithological work in hand at Washington, D. C. One of the best reports is by Dr. A. K. Fisher and is entitled *The Hawks and Owls of the United States in Their Relation to Agriculture.* This was published in 1893 as Bulletin No. 3 by the Division of Ornithology and Mammalogy of the United States Department of Agriculture. Many other reports have been issued which include food-studies of most of the common birds. These may be obtained free of charge by addressing the Department of Agriculture, Division of Ornithology, at Washington, D. C. The men at Washington

NAME	Arrive	NEST				EGGS		INCUBA-TION	YOUNG IN NEST	NO. OF BROODS	DEPART
		Builds	Location	Height	Material	No.	Color				
Robin	March early	April late	In tree crotch	5–25 ft.	Mud grass	4	Pale blue	14 days		2 or 3	October

LIFE-HISTORIES OF BIRDS

Name	Beneficial Animal	Harmful Animal	Beneficial Vegetable	Harmful Vegetable	% Ben. An.	% Harm An.	% Ben. Veg.	% Harm Veg.	Species Ben. or Harm.

FOOD CHART OF BIRDS

examine the food-contents of the stomachs of birds from many localities, and draw definite conclusions from the results. For example, Mr. Fisher examined 255 stomachs of the screech owl, and the following is his summary:

> Of 255 stomachs examined, 1 contained poultry; 38, other birds; 91, mice; 11, other mammals; 2, lizards; 4, batrachians; 1, fish; 100, insects; 5, spiders; 9, crawfish; 7, miscellaneous; 2, scorpions; 2, earthworms; and 43 were empty.

Mr. Fisher (p. 11) divides the forty-nine species and twenty-four subspecies of rapacious birds into four classes, as follows:

a) Those wholly beneficial or wholly harmless.

b) Those chiefly beneficial.

c) Those in which the beneficial and harmful qualities seem to balance each other.

d) Those positively harmful.

The fourth group, which is of chief interest, contains only six species: sharp-shinned hawk, Cooper's hawk, goshawk, duck hawk, the gyrfalcons, and fish hawk.

The birds of prey then, instead of being killed wherever possible, as they generally are at present, should be carefully protected. This fact once learned by a child will have a lasting effect upon his attitude toward birds, and will lead him to use his influence on his companions.

6. *Habit chart.*—Birds are individuals, and the members of each species have certain habits in common. We find that the robin runs along the ground, the grackle walks, and the blue jay hops. Such facts as these should be recorded in the habit chart.

HABIT CHART OF BIRDS

Habitat (near water, meadows, trees, etc.)....................................
Nesting-site (on ground, in bush, etc.)....................................
Manner of flight (undulating, slow, soars, etc.)..........................
Movements in trees (creeps, clings, perches, etc.)........................
Movements on ground (runs, walks, etc.)....................................
Food-getting habits (catches insects in flight, etc.).......................
Character of food (animal, vegetable, insect, etc.)........................
Position while at rest (perched on limb, etc.)...............................
Other habits ....
Song or call:
where given (in flight, on ground, etc.)....................................
when given (early morning, twilight, etc.)..................................

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[*To be continued*]

COMMON-SENSE INTERPRETATIONS OF SHAKSPERE

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The earnest teacher who is desirous of interpreting literature in accordance with the canons of literary criticism has a hard time of it nowadays. There is so much criticism that loves to play with the recondite and the bizarre. Especially is this true of Shaksperean criticism. From the days of Goethe to the present era of Maeterlinck, there has been an ever-rising flood of criticism. Not all have been as modest as Goethe, who in one of his conversations said: "But we cannot talk about Shakspere. Everything is inadequate. It is true I have touched upon him in my *Wilhelm Meister,* but that is not saying much." Your modern critic differs from Goethe in that he thinks his "system" is adequate and that he has said much.

Since the sane-minded critics have said the sensible things about Shakspere, the only hope the new critic has is that he may say something startling, or evolve a system which will explain Shakspere. The system-maker is usually a German or a disciple of a German philosopher. The trouble with the system-makers is that they are more concerned about their systems than they are about the truth in Shakspere. Matthew Arnold has said something suggestive in regard to the system-makers:

> There is the judgment of ignorance, the judgment of incompatibility, the judgment of envy and jealousy. Finally there is the systematic judgment, and this judgment is the most worthless of all. . . . . Its author has not really his eye upon the professed object of his criticism at all, but upon something else which he wants to prove by means of that object.

And the trouble with the critic who loves to startle with a theory contrary to all accepted beliefs is that he is narrow. A true criticism of literature is wholesome, generous, vital. The bizarre critic loves to nibble away at a hidden and remote corner of life. He might be compared to the scientist who knew all about the circulation of blood in a rabbit's hind foot, but had never heard of vertebrates. It is very difficult even for the broad-minded critic to remain in the position of an impartial observer, for, as Goethe somewhere says, we are so ready to mix up our own imaginations and opinions with what comes under our notice. If this is true — and it is — how easy it must be for the man with a theory to run wild. Whitman may have had such critics in mind when he said: "I charge you forever reject those who would expound me, for I cannot expound myself."

Let me illustrate what may be called the Babylonish dialect of the system-maker:

> The general movement of the play [*The Merchant of Venice*], therefore, lies in the conflict between the right of Property and the existence of the Individual, and in the Mediation of this conflict through the Family, which owes its origin, in the present case, to that same Individual whom it rescues. . . . . All the characters of the play, though possessing peculiarities of their own, must be seen in their relation to this fundamental theme of the work.
>
> There are three essential movements, which may be named in order: the Conflict, the Mediation, the Return. Of the first movement there are two threads, showing, respectively, the Property-conflict and the Love-conflict, though the former is raised to the highest spiritual significance by the underlying religious element. These two threads, moreover, are interwoven in the subtlest manner; still, an analysis has to tear them asunder temporarily. In the first thread the antagonists are Antonio, the Christian, and Shylock, the Jew. . . . . The second thread unfolds the Love-conflict, which has here three phases, represented by Portia, Jessica, and Nerissa. The second movement — the Mediation — has the same two threads. . . . . the third movement will be the Return.

This extract is typical of about eighteen hundred pages of criticism in three volumes by a critic of Shakspere. Much of this criticism is helpful and stimulating. But why should common-sense be overlaid with the pedantry of a cumbersome terminology? It is almost burlesque. This is German criticism with a vengeance. Gervinus tells us that Shakspere's purpose in *The Merchant* is to delineate man in his relation to property. But Ulrici objects, and informs us that the fundamental unity lies in the principle, *"Summum jus summa injuria;"* and Rötscher "goes him one better" by declaring the topic of the play to be the "dialectics of abstract rights." Well, well, well! How much the unsophisticated spectator in the theater has lost by his not knowing that before his eyes was enacted the drama of the "dialectics of abstract rights!" For my part I prefer to see in the play what the common people see there—the story of a vindictive Jew whose passion of hatred is thwarted by the nobler passion of love and mercy.

Let us try our hand at over-subtle criticism to see what can be done to overlay simplicity with the jargon of technical expression. One of the familiar Mother Goose melodies is the story of *Jack and Jill*. But this story, coming to us from the primitive past, is full of a deep philosophy. In fact, it is an ethical world-drama in five acts, as can readily be seen.

ACT I

Jack and Jill went up the hill
To fetch a pail of water.

ACT II

Jack fell down and broke his crown,

ACT III

And Jill came tumbling after.

ACT IV

Up Jack got and home did trot,
As fast as he could caper.

ACT V

Dame Jill had the job to plaster his knob
With vinegar and brown paper.

This is a tragical-comical-pastoral in which the first movement, as usual, portrays the wrong, the violation, which in this case is likely a disruption in the family. We may call the first movement the Conflict. And the second movement, consisting as it does of the Return and the Mediation, is the remedial activity closing up the breach in the craniological world, thus foreshadowing the ethical readjustment of the domestic serenity of the hero and heroine. The first thread of the first movement, beginning simultaneously with the hill-climbing, twines and intertwines itself about the unsuspecting masculine bucolic. As a result he falls, and when he falls, he falls, unlike Lucifer, to rise again. In addition to this twining, the first thread intertwines with the second thread of the first movement. This action and interaction constitute the primordial cataclysm of an attenuated Nemesis. Herein is illustrated Nature's insistence on man's docility to the primary facts of his subliminal consciousness; for why did they go up the hill when water will run down a hill, if it is given but half a chance? After the instinctive feeling of the reader for justice has been satisfied, and before melancholia has fixed its fangs in our bosoms, the Tragic yields to the irresistibly comic; for, lo! Jill, the uncompromisingly sedate Jill, comes tumbling after with picturesque gyrations and genuflections. And this, making the third thread of the first movement, brings us to the end of the third act.

Before taking up the first thread of the second movement, let us find the "turning-point" of the drama. As a well-known expounder of Shakspere has ingeniously and arithmetically computed, we can find the "turning-point" in a Shaksperean drama by finding the middle of the third act. All that is needed is a little imagination and less arithmetic. Herein we are gratified to discover that the bard of Jack and Jill, with the sublime unconsciousness of genius, has conformed to the latest canons of art. By counting three backward or forward we fix the "turning-point" in the word "came." How almost miraculous it is! This unpretending monosyllabic strong verb in the preterite is the "turning-point" of the comedy; for had Jill failed to come, how could Jack ever have attained either a whole head or a whole heart?

We now enter upon the second movement. The first thread of the second movement runs back to the third thread of the first movement, thus weaving into a connected unity the fabric of the Ethical Whole. The pervasiveness of the Comic is intensified into a sub-climax by Jack's capering with a broken head. The second thread of the second movement shows Woman as the Mediator after the Return. As in all Shaksperean plays, so here too the great Mediator between fallen Man and Violated Justice is lovely Woman, in whose sympathetic hands the vinegar of Nature and the brown paper of Art are the phenomena of the universe for broken heads and hearts.

To what extent the bizarre in criticism may go we see in the suggestion of one critic that *The Merchant of Venice* was written to arouse sympathy for the despised Jew. If Shakspere had this intent, he certainly took a most extraordinary method. This point of view is so preposterous that one needs to apologize for showing its absurdity. But, as the view is held, we may be forgiven in calling attention to several matters worth noting.

The most obvious answer to the suggestion of this critic afflicted with the itch for novelty is that pity for Shylock is not the feeling awakened in the spectator of the drama. This interpretation of the play is not the meaning given to it by the commonsense of the people who throng our theaters today. Keeping in mind that sympathy for an alien and oppressed people is the outgrowth of democracy, and that this broadened charity which can call an alien a brother is a spirit peculiarly modern, we might expect the audiences of today to look with gentler feelings upon Shylock. But, in spite of all this, your modern theater-goer does not read into the play a plea for the Jew. If this is true, how much less would an Elizabethan theater-goer three hundred years ago? In 1600, when *The Merchant of Venice* was printed, on its title-page was found: "The Excellent History of the Merchant of Venice. With the extreme cruelty of Shylock the Jew towards the saide Merchant, etc." This certainly does not look like a plea for the Jew. Shakspere was too large-minded to share in the common race-prejudice of his day, but he was also too far-seeing a playwright to antagonize the people. Play-writing was his business. He wrote to fill the theaters, not to give material to critics of superfine discrimination.

In reading and re-reading the plays of Shakspere, I have been much impressed with the care he takes to make his meaning clear. Of course there are passages that defy explanation. But here it is to be noted that such passages are usually of a philological difficulty. The difficulty arises from an emended text, from an obsolete word, from a provincialism. The line may be obscure, but the scene, the act, the play itself, is not. Shakspere seems to keep in mind the Quintilian precept that one must not only be clear enough to be understood, but so clear that one cannot be misunderstood. In writing plays to be acted, Shakspere knew that the meaning must be caught on the jump. The spoken word is winged. We have been reading and studying his plays so earnestly that we forget that we can get the meaning of the play by seeing it well acted. "I went to see *The Winter's Tale* recently," said a schoolman to me lately, "and I found that I understood the play and enjoyed it, although I had not an opportunity to read the play before going to the theater." Of course he did. Did the Elizabethans read the play before going on the Thames to the "Globe"?

When Shakspere fears he may be misunderstood, like a skilful lawyer before an average jury, he repeats the idea in various forms. Take this illustration from *Othello:*

> OTHELLO: . . . . Is he honest?
> IAGO: Honest, my lord?
> OTHELLO: Honest, ay, honest.
> IAGO: My lord, for aught I know.
> OTHELLO: What dost thou think?
> IAGO: Think, my lord?
> OTHELLO: By heaven, he echoes me,
> As if there were some monster in his thought
> Too hideous to be shown. . . . .
> . . . . thou criedst "Indeed."
> And didst contract and purse thy brow together,
> As if thou then hadst shut up in thy brain
> Some horrible conceit.

It is as though Shakspere feared some miserable actor might not catch the subtlety of Iago's tones and so he makes Othello say what the intelligent reader knew before Othello repeats.

Take another passage in the same play. In Act V, scene 1, after Iago has sent Roderigo on his mission, he thus soliloquizes:

> . . . . Now, whether he kill Cassio
> Or Cassio him, or each do kill the other,
> Every way makes my game.

Now, anyone who has read the play up to this point knows what Iago means by his, "Heads I win, tails you lose." We know that if Cassio is killed, Iago will be freed from a source of exposure, and if Roderigo is killed, he will be freed from the reproaches of a fool from whom he has borrowed money. Shakspere might have stopped right there, but he does not. He knows an audience of theater-goers does not want to think. So he continues:

> . . . . Live Roderigo,
> He calls me to a restitution large
> Of gold and jewels that I bobb'd from him
> As gifts to Desdemona
> It must not be. If Cassio do remain,
> He hath a daily beauty in his life
> That makes me ugly; and, besides, the Moor
> May unfold me to him; there stand I much in peril.

In view of Shakspere's care to make himself understood, what shall we think of the critic who solemnly insists that Othello had had a guilty love for Emilia, and that Cassio is an effeminate weakling? If Othello was guilty, why does not Shakspere say so? Not only does he not say so, but he even makes Emilia in her reply to Iago say:

> O, fie upon them! Some such squire he was
> That turned your wit the seamy side without,
> And made you to suspect me with the Moor.

Would Shakspere have Emilia make such a comparison, whose whole force lies in the absurdity of the charge, had he thought of Othello as guilty? And would he have Cassio, along with Malcolm in *Macbeth,* Fortinbras in *Hamlet,* Octavius in *Julius Cæsar,* as the rejuvenating force after the catastrophe, if Cassio is to be considered as a namby-pamby lady's man? In asking this we are not holding Cassio up as a model young man fit to be the hero of a *Ladies' Home Journal* story, but he is not a degenerate.

Of all the plays *Hamlet* presents the most fertile field for the excursions of the recondite critic, and yet *Hamlet* is one of the most simple plays ever written; by "simple" I mean popular. Even a child can be absorbingly interested in a *Hamlet* matinee. This is not the place to touch upon the diverse and far-fetched theories of philosophic expositors of *Hamlet,* but we do wish to suggest that *Hamlet* interpreted by the common-sense of the teacher can be of vital interest even in the elementary schools. Why should the teacher who really enjoys *Hamlet* be so muddled by trying to reconcile the fantastic theories of novelty-hunting critics as to stand before the class benumbed with the paralysis of over-criticism?

The bane of much of our teaching of literature is our respect for trifles, our tithing of mint and cummin, our lack of a vitality springing from spontaneous enjoyment. The function of literature is to awaken and enrich the spiritual life. Shakspere has writ large the meaning of life — life with its hates and jealousies, its intrigues and conspiracies, its perverseness and maladjustments; but also with its loves and friendships, its mercy and forgiveness, its reconciliations and adjustments. The teacher who has *lived* can give a more vital interpretation to these meanings through the revelations of his own personality than the critic who is striving after a reputation by constructing a system that shall circumscribe the genius of William Shakspere.

A PLAN FOR A VACATION SCHOOL IN CONNECTION WITH THE SCHOOL OF EDUCATION

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Chicago

Some of the arguments for the extension of the vacation-school idea have been presented in a previous number of this magazine. The plan which is here proposed is tentative, and therefore suggestions from interested readers will be welcomed. A farm of five hundred acres at Wheeling, Ill., thirty-two miles from Chicago, on the Wisconsin Central Railroad, has been leased, and will be managed as a business enterprise by an experienced farmer, with the necessary number of assistants. The farm will be self-supporting and not in any way dependent upon the school.

The following industries will be represented the coming summer: (1) cultivation of fields by the best-known methods, with modern machinery; (2) raising of short-horn cattle; (3) raising of the best varieties of pigs; (4) raising of the best breeds of chickens; (5) a market garden with as many kinds of vegetables as can be taken care of with the force available. Other industries will be added as rapidly as practicable. The farm has three good houses, two of them with modern improvements and twelve rooms each. These houses will be occupied during the summer by three families who are patrons of the Elementary School, including six children who are now in the school. Two families of help, without children, will be permanent residents. There are accommodations for ten or twelve more persons, if they are willing to co-operate to some extent in the necessary labor, since additional help from the city cannot be depended upon.

It is proposed to take a small number of pupils who are in the High School, or ready for it, and allow them to co-operate in the industries that are being carried on, so that they may see the practical application of much that they have learned during their Elementary-School course. A farm vacation may be made a natural step from the recapitulated industries of the past to the productive industries of the present. The month when the school year closes finds the berry season in full blast; then come haying and harvesting, which, with improved machinery, are not the exhausting labors that have left unpleasant associations in the minds of farm boys of a generation ago. Plowing with a riding plow is an occupation that is much enjoyed by the city boy. Given ten boys and twenty possible occupations, there is little chance that any of them would become drudgery for a period of six weeks or three months. Any farm managed on broad lines affords such a variety of employments that the boy or girl who has been through the Elementary School, and has the attitude toward industry that the two founders of the school intended to cultivate, would be likely to prefer this kind of a vacation to one that calls only for the invention of ways to kill time. It is proposed to have each industry that is represented carried on by a man or woman who knows both the science and the art — of horticulture, for example — and can connect the work in science which the children have already had with the practical labor of every day. The children's knowledge of geology, botany, entomology, ornithology, practical chemistry, and domestic science may be greatly increased in this way. Practice in mathematics may be obtained by the use of computations; languages, by association with foreign teachers; civil government and economics, by informal discussions or by the organization of the children into a state or republic — a plan already tried most successfully at some boys' schools and at the Hyde Park High School. The culture side of life may be kept up by the reading of history and literature in the afternoon hours when manual labor would be too strenuous, and by discussions with teachers.

A daily program of from four to six hours of manual labor is proposed, with afternoons devoted to games, reading, and scientific or agricultural excursions, ending in picnics, and evenings devoted to music and discussions of the work of the day.

Besides co-operation in the ordinary industries of the farm, there are opportunities for other kinds of productive labor. Those whose taste is more mechanical than agricultural may find scope for it in the construction of fences and farm buildings; while the restoration of a good old house and the construction of artistic furniture for it may occupy another set of boys. The club-house at the Laboratory School was perhaps its most treasured possession. An excellent brick house, on rising ground, built in 1862, with large rooms and an observation tower, might be made an ideal country club-house where parents could be accommodated over Sunday. A small stream might easily be made to furnish a swimming-pool, while the grounds of the old house afford ample opportunity for landscape gardening.

The life of the first summer is intended to combine work and play in an attractive manner. The financial side is not worked out, but it seems to those most interested that there should be a certain amount of labor required of all, and opportunity given, for those who wish to do so, to work more and so earn a part of their expenses.

While three months is all that is planned, a farm school open as much as six months in the year to high-school pupils is desirable from several points of view. Parents who can do so are giving their children more and more time in the country, often taking them out of school by the first of May, because they feel that some kind of active life, or travel, is more important than the time spent in school. While it is not likely that any pupils would wish to spend six months of every year on a farm, it is probable that out of a high school of six hundred pupils there would be a large number who would wish to spend at least one full season in this way. With the addition of more industries, such as sheep-raising, bee-keeping, dairy cattle, and a greater variety of fruits and vegetables, the farm would become every year more valuable educationally.

The town of Wheeling is seven miles west of Glencoe and twenty miles from Lake Villa. It is in a section of country that is occupied by Germans of the peasant class, and has not been discovered by wealthy men who are building up country estates. Excellent land may be purchased at a little more than half the cost of similar soil six or seven miles east or north. A partially completed trolley line will bring the town within twenty-one miles of the center of the city.

A successful vacation school of the kind here outlined would do much to broaden and strengthen the lives of children as well as to relieve parents of much anxiety as to how to provide for growing boys and girls in the idle summer time.

EXTRACTS FROM THE LAST REPORT OF THE SUPERINTENDENT OF THE CHICAGO VACATION SCHOOLS

MRS. I. S. BLACKWELDER
Chairman of the Chicago Vacation School Board

The first Chicago vacation school was opened in the summer of 1896 in the Joseph Medill School building, under the auspices of the Civic Federation. In the summer of 1897 Miss Mary McDowell, of the Chicago University Settlement, opened a school in the Seward School building, the funds being contributed by Mrs. Emmons Blaine and Mrs. Marian Sturges. In 1898 five schools were supported by the women's clubs of Cook County. In 1899 the Chicago Permanent Vacation School and Playgrounds Committee of Women's Clubs was formed for the purpose of providing funds for the vacation schools until such time as the Chicago Board of Education should decide to support them, and that committee has provided nearly all the funds up to the present time, with the exception of $6,000 contributed by the Board of Education. In order to conduct the schools in a thorough manner, a Vacation School Board, made up of educational experts and representatives of the women's clubs, took over the active management of the schools, and has conducted them ever since.

The vacation schools have a triple function: first, to remove children from the evil influences of the street during the summer; second, to give them a taste of country life by means of excursions; and third, to serve as experimental stations for the public schools, where educators may have an opportunity to try new ideas without demoralizing the regular day schools, and where normal-school cadets may receive practical experience in teaching.

Weekly excursions into the country are among the most important features of vacation schools. There the children study nature at first hand, collect material for classroom work, and try their hands at reproducing the scenes with colors or pencil, besides having a happy time. Perhaps the most important result is the stirring of new interests in the minds of the pupils. It is a notable fact that no accidents or other disagreeable features, except slight showers, have ever interrupted the plan of excursions, while the discipline maintained by the principals and teachers has been most excellent.

As experimental stations for the public schools, the vacation schools are accomplishing much good. To quote from the report for 1903:

> In Chicago the vacation schools helped to give impetus to the movement which had for its object the introduction of manual training into all grades of the elementary schools. Many of our most successful teachers of construction work in the public schools received their first lessons in basketry, iron-work, and light wood-work from pupils who had been taught in the vacation schools.

Many cadets serve in the vacation schools each summer, and there is no doubt that the practical experience they acquire is of very great value to them when they begin regular teaching in the public schools. The qualifications necessary for a good vacation-school teacher are peculiar. Personality and interest in the work are the most important factors to be considered. At present the teachers in the vacation schools are all taken from the Chicago public schools and are chosen with the greatest care.

The curriculum for the vacation schools, which was put in force several years ago, has been found to be such an excellent one that very little change has ever been made in it except to amplify the treatment of some of the subjects. In every school the following departments were maintained: kindergarten, physical culture, elementary manual training, advanced manual training, sewing, nature-study, music, and drawing. Cooking was taught in the Jones, Hamline, Washington, Burr, and Dante Schools; the Burr School gave special attention to a vegetable garden; the Dante and the Jones Schools inaugurated housekeeping departments; while the Washington School made a specialty of printing, pottery, and clay-modeling. The work of the kindergarten was so much like that of the public schools that no special attention will be devoted to it in this report, further than to say that the teachers were unusually efficient.

In most of the vacation schools the work in physical culture was hampered by lack of gymnastic apparatus and space for games and drills. It would be well, of course, to give all physical training out of doors, but this is not practical except at the Burr School. There the yards are large and well equipped with apparatus. In the Ghetto district, and in the Italian district just north of it, we found that many of the children knew very little about play, and that the few games the boys knew were anything but lively. Teachers found at the beginning of the term that these pupils were slow to respond to instruction in gymnastics, but before the close of the term they were lively and boisterous enough to please the most strenuous advocate of physical culture.

The sewing department was one of the most popular in the schools. The work was made very practical, and it was appreciated so highly by the pupils and parents that we had great difficulty in securing enough samples of the finished product to make a good showing at the vacation-school exhibit in the Art Institute. Primary sewing was abolished; for it seems a waste of time and energy to attempt to teach the little children to sew something that will be useless when finished; besides, their eyes and hands are totally unfitted for such work. Older children were taught hand-sewing during the early part of the term, and when the teachers thought the pupils were ready for the sewing-machine, they were taught how to use it.

The work in elementary manual training was unusually satisfactory, because of its great variety and the skill with which it was executed. Teachers were warned to avoid making useless things merely for their so-called beauty, and the number of beautiful, substantial articles taken home to parents and friends as a result of this training was remarkable. Among these were card-cases, hand-bags, and belts made of leather; boxes, tool-chests, and doll-houses made of wood; trays, plates, pencil-holders, sconces, and lanterns made of hammered brass, copper, and iron; baskets, mats, and dolls' hats made of raffia.

In the advanced manual-training department special attention was also given to the making of useful articles, thus relating the work as far as possible with the home. Boys were taught not only how to repair furniture, but how to make it, and much of the mission furniture made in the schools would do credit to a fairly good mechanic. The exhibit of manual-training work at the Art Institute was so good that the sale of a few articles more than paid for the expense of the exhibit.

The pottery work at the Washington School is regarded as a branch of manual training in which special aid is given to the development of the æsthetic taste. The pupil first makes the design of his object in charcoal, colored crayon, or water color, and then attempts a reproduction of this design in plaster or clay. Four methods of work are used: hand-modeling, casting process, throwing-on process, and the Indian method of coiling. All the work is done by the children except the firing, which of course has to be done by an expert; but it is done in the school, where the process can be seen by the children.

The work in nature-study is very difficult for the teachers because of the great lack of material in the crowded districts. Those who live in the suburbs carry to the schools vast quantities of material, but where this material is not available simple lessons in physics and chemistry are given. The conditions for nature-study at the Burr School are almost ideal, owing to the large vegetable garden. This garden is marked off in plats for each room, as indicated in the annexed diagram. Seeding is done in May by public-school children, and the garden is cared for during the summer by pupils of the vacation school. Much of the material used in the cooking-room is obtained from this garden.

The outline of music prepared by Miss Marie Hofer in 1900 gives an excellent idea of the work we have attempted in this art:

> The character of the vacation-school music should be recreative, vitalizing, refreshing, to develop the mind while the spirit of song should prevail. For this reason, no formal music teaching will be done, no books will be used. Only such songs will be used as will have a direct bearing upon, and relation to, the daily experiences of the children. In connection with this work of the school, patriotic and national songs will be chosen with reference to the prevailing nationalities of the neighborhood. This will involve history of race, folk-songs, and dances. A special correlation of music and rhythm will be made, with the effort to utilize the impulses gained through the music in rhythmic expression as a basis for physical training.

The work in the drawing department is to a great extent based on the experience gained by the children through their excursions to the country. The art work varies greatly in the different schools, but the outline of art work in the Foster School will give a fair idea of what is done in the others. To quote from this outline:

> The objects of the art work are: to cultivate an appreciation of beauty in form, color, and arrangement; to give a sense of pleasure in the knowledge of some artistic creation; to give actual knowledge of the fundamental truths governing form, color, and composition. The materials used were clay for modeling, colored crayon, water color, paper, and scissors.

The establishment of the housekeeping department at the Dante School was an extension of the curriculum, forced on us by the needs of the people of the district. The best idea of the work in the housekeeping department can be obtained from the report of Miss Susan Hayward, the teacher in charge:

> If it is true that the purpose of education is to teach us how to live, it would seem best to begin our teaching in the home — not in an ideal home, nor in an imaginary home, but in the real home. "The hand that rocks the cradle" should be a clean hand, trained to do clean work. But where can this training be obtained? Obviously, for thousands of the poor, only in the public schools. It was the need of the people for training in domestic science that led to the experiment of the housekeeping department in the Chicago vacation schools. Cooking and sewing have been taught in these schools for several years, but the housekeeping course was adopted in 1904.
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> Inspection of the neighborhood of the Dante School, in a congested Italian district, led the teachers and principals to believe that two rooms represented the average home. This problem then presented itself: Given two rooms, whitewashed walls, bare floors, bare windows, unwholesome environment, money limited to the meager income of the wage-earner, and the time of the teacher's work limited to six weeks, to find some way of interesting the people to make better homes.
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> The basement of the school furnished bare floors, bare windows, whitewashed walls, and one room. The needle, with the aid of hairpins and numerous yards of dark-green burlap, provided a partition. This partition separated the basement into a kitchen, living-room, bedroom, and dining-room. Thin scrim curtains covered the lower sash, and dark-green wall paper, tacked above the scrim, gave a pleasing effect to the whole room. Dressing-case, wash-stand, bed, one rocker, and a discarded bench made up the furniture of the room; yet here eighty girls were taught to care for a bedroom, and eighty pairs of clean hands smoothed, patted, and tucked that bed after the most approved fashion.

But beds and curtains do not remain clean long in Chicago, and so washing and ironing became necessary. A little three-burner gas stove supplied the heat, and eighty girls were taught to wash and iron the necessary clothing of this model house — not a doll-play wash, but the real thing, a regular day in a regular way.

The chief charm of this new, beautiful basement home was the dining-room. A cheap pine table, covered between meals with green burlap, was adorned with a ginger jar or a green bottle. Here, in classes of twenty, the girls set and reset the table with careful precision. Iron-stone dishes of ordinary blue were placed carefully on a snow-white cloth, smoothly ironed to a satiny sheen by the hands of the pupils. Nor was this a useless setting; for guests were served, and each pupil was trained to serve as well as to set the table. In the kitchen, beyond the green curtain partition, these eighty girls were taught to cook simple wholesome foods: the cereals, soups, potatoes, tea and coffee. Dish-washing, sweeping, scrubbing, dusting followed, when, presto! change. The dining-table vanished, and a study graced what had now become a sitting-room, containing a long bench filled with burlap-covered pillows, a few chairs, a book-rack, some flowers, one good picture, and a plate-rack. Not much — only a few dollars expended; nothing that the child did not or could not have in her home; not much — only eighty girls filled with enthusiasm for housekeeping; not much — only the beginning of eighty homes; not much — only the shaping of eighty lives; not much, yet all.

The value of vacation schools is proved by the very great yearly increase in daily attendance, the enrolment increasing from about 700 in 1896 to 6,847 in 1904. To quote again from the vacation-school report for 1903:

> It is quite useless to attempt to estimate the number of pupils who would attend the vacation schools if they had the opportunity. Hundreds are turned away from each school each year, and it is safe to say that at least thirty schools in our foreign district would be crowded with children if the Vacation School Board could afford to open that many schools.

Every day during the past summer barefooted children walked miles to the office of the superintendent of the vacation schools in the hope that they might melt his heart and secure a ticket to the schools; and it was not an unusual thing to find several parents waiting in the office for the coveted tickets of admission for their children.

It is hoped that before many years the Board of Education will have funds enough to carry on the work that has been so long supported by the women's clubs. When this is accomplished, the schools will have a permanency that they now lack, and, in many respects, their efficiency will be greatly improved. The annual appropriation would be made early, and teachers engaged so far in advance of the summer term that their work could be thoroughly planned. Until the board is ready to take over this work, it is hoped that the women's clubs will continue to support the schools as generously as they have done in the past.

A very gratifying feature of the schools of 1904 was the interest shown in them by the British vice-consul, who, at the request of his government, made a thorough examination of our schools. The results are embodied in a consular report of some length, excerpts from which have appeared in many of the leading papers of Great Britain with editorials on the work of the Chicago vacation schools.

EDITORIAL NOTES

Teachers' Federation and Labor-Unionism

The present controversy in Chicago between the Board of Education and a portion of the teaching force, represented largely by the Teachers' Federation, marks an interesting epoch in the evolution of the common-school system. While the discussion just now is confined to this city, the questions involved are of more than local interest. There are certain definite principles at stake which must be clearly defined everywhere before the schools can be safely considered the cradle of a true democracy.

Points at Issue

The immediate cause of the irritation at this time is the attempt being made by the board to secure some charter provisions and certain legislation bearing upon finance, the position of the superintendent, the election or appointment of members of the board, the promotion of teachers, and perhaps other matters of less importance. Aside from the right or wrong of the propositions themselves, the most interesting aspect of the situation is in the singular fact that a large body of teachers dares to take a decided stand against such legislation proposed by the board as they, the teachers, consider inimical to their best interests. The spectacle is unique in our educational history. The Board of Education, superintendents, principals, and all others clothed with authority have had things their own way so long that it is not surprising that they should be amazed, and at last enraged, at the cool presumption of the teachers. On the other hand, the teachers have been for so long a time non-resistant, and inert as a public influence, it is but little wonder that they show some signs of recklessness with their new-found strength.

An Innovation in Education

The fact is being developed with great clearness that the much-boasted freedom of the teacher has been but little more than

Freedom of the Teacher

an empty phrase. The more one reflects upon it, the less well can he understand why it ever should have been applied to a teacher at all, so completely has the whole educational situation been dominated by officials whose real and natural functions are administrative only. It is but very recently that the teacher's tether has reached beyond the space around her desk. The course of study has been manufactured by those who have had the least intimacy with the children, and she has been definitely told how to apply it in her schoolroom, page by page. Every move of the ordinary teacher in the past has been timed and chalkmarked. Salaries have been fixed, raised, or lowered, and teachers have been appointed, transferred, or dropped, with precious little regard for the individual. And when there has not been actual injustice, the knowledge that it could be, and the fear that it might be done have combined to paralyze initiative and to destroy effort. This all rested upon the eternally old theory that there is one part of the race that has a monopoly of all the sense and all the conscience, to which the officials of administration belong, and another portion of the race that has neither sense nor conscience, to which the teachers belong. And so one class, as though by divine right, assumed to dominate the other.

Teachers Should Have a Voice

To be sure, matters have been slowly improving. Courses of study are changing for the better, it is true, but, generally, only so far as the teachers themselves have been permitted to participate in making them. The best things in the schools today are those that have come from earnest, thoughtful, and trained teachers in actual daily contact with the children. It is unfortunate that so many of the teachers have been and still are so poorly educated and so badly trained: that is why progress is so slow.

The history of the past decade is interesting. Not long ago the rank and file of the profession were utterly unorganized. Not only were their positions insecure, their salaries were constantly subjected to such influences of a political character that it made life a much heavier burden than the Lord originally intended it should be. There seemed to be a great shortage of funds in a city that has always been bombastic on the subject of prosperity and wealth. The men at the helm — superintendents and Board of Education — confessed themselves powerless to find a remedy, and the integrity of the school system was endangered in this city as never before.

Effect of No Organization

Then there arose from the ranks an individual who, at first almost lone-handed, sought to stem the tide — a woman who, in the face of ridicule, scorn, and denunciation, set for herself and the common teachers no less a task than that of forcing those "respectable" thieves, the tax-dodgers, to turn into the public treasury the money that was justly due. This movement has no precedent and no parallel in our educational history. Attacking the skulking tax-dodger along the entire line of his defense, from the curb-stone to the Supreme Court, a decisive victory was won which brought many thousands of dollars into the school fund which the Board of Education otherwise could never have secured.

The Tide Turns

This triumph of the common school-teacher on behalf of himself and the schools possessed for him tremendous import. It marked the opening of an absolutely new era. It was the first time in their history when the teachers had appeared as a positive civic force. For the first time they had left the academic shades and won a combat in the open arena of practical life.

Effects of the Victory

The moral result of this victory was much farther-reaching than the financial. It did that thing which is most dangerous to those who try to hold in leash or who seek to dominate a human being — *it made the teachers think*. Having once thought, and acted too, with so much effectiveness on the question of tax-dodging, it must not be supposed for an instant that they will ever again regard matters pertaining to the welfare of the schools with the same indifference that prevailed before the present steps toward organization were taken. A broader

Moral Effect

intelligence will gradually supplant the old proverbial narrowness, and courage will take the place of cowardice.[1]

The Present Discussion

The move which is now the cause of a violent discussion is the alliance of the Teachers' Federation with labor organizations, with a view to affecting legislation. This step is so new, so startling, so unprofessional in the light of anything ever done before, so generally unteacher-like in its boldness, that many people at once conclude it must be wrong, and the great majority, perhaps, have genuine doubts as to its final wisdom. Objection to the union of the two organizations is made on the ground that the labor unions represent but one part of the people, while the teachers represent all of them; that when the teachers join forces with labor, they break faith with those parents who represent capital, and thus the tendency is to widen the breach which they should try to heal.

Teachers and Labor Unions

There is some truth, as to fact, in these statements, but they do not correctly represent the principle involved. The teachers believe that certain measures proposed by the Board of Education and the superintendents are out of harmony with the spirit of democracy in education; that they represent a tendency toward bureaucracy which is not the best for a system of schools that includes all the people who stand for democracy. It places the teachers in a false light, therefore, to say they no longer represent the whole people; for, by this alliance they merely adopt what seems to them to be the most effective method of conserving the interests of the whole. Even labor-unionism does not ultimately stand as one part of the people against another, but *for the highest form of adjustment between the two parts*—labor and capital. It can be said, therefore, that in the best sense the labor unions themselves represent the true interests of the whole people. The same may be said also of capital, so far as it honestly stands for an equitable adjustment between these two great functions of society. The public at large will finally adopt those measures which seem to embody the greatest wisdom without special regard to their origin.

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[1] Within ten years a small association of Chicago principals discussed the advisability of changing the city normal-school course from one to two years. While they privately indorsed the idea, they voted down a resolution, merely asking the board to consider the matter, on the ground that the trustees, certain ones in particular, might interpret it to be an offensive attempt at dictation! In the light of such servility, so recent, the present disposition of the common teachers to "talk back" to the board is decidedly refreshing.

The Real Cause of Opposition

It is to be suspected, however, that the trustees are not less aggravated by the violation of a supposed principle than by the fact that the teachers have presumed to oppose the board's ideas as to what is best for the schools. This is the real innovation, and it will take everybody some time to get accustomed to such unusual interference. The teachers have been adjured to keep their profession pure by forswearing politics, and they observed the injunction until the politicians brought the schools to the verge of financial ruin. Then the teachers rebelled and gave the evil-doers and the weaklings an object-lesson in accordance with correct pedagogical principles, and there is not an atom of reason why this lesson should not be followed by others of like kind. There is no reason why the common teachers should not be an influential factor in settling all questions that pertain to the schools. The schools are made for the children, and the thoughtful teacher in daily touch with their lives ought to be a valuable witness in their behalf. The course of study, and all that pertains to instruction, should be developed among all of the teachers; these are not matters for either the superintendents or boards of education alone. It is also true, therefore, that their interests are involved in methods of administration. They are entirely within their rights when they, as a part of the public, consider questions relating to the appointment or election of the superintendent and board of education; when they lay out plans for self-improvement; when they seek to establish methods by which merit may be recognized and rewarded by either financial or professional advancement, or both. It is inevitable, too, that these interests should run over into civic affairs relating to the levying and collection of taxes, the establishment of salaries, tenure of office, and the granting of pensions. All right-minded people may be convinced easily of the fairness,

Scope of the Teacher's Influence

the wisdom, and even the necessity of the teachers taking an influential stand on these questions.

Teachers under Suspicion

The opposition to the teachers' movement, including their alliance with the labor organization, is not based so much upon the principles involved as it is upon the fact that they either have misused or threaten to misuse their power. The real source of danger to their cause is not in the opposition of the board or superintendents, but it is within their own ranks. They enrol among their own number the ignorant, the self-seeking, and the unscrupulous. Hitherto these have been held in check by arbitrary rules of the board and by the personal authority of the superintendent. It is inevitable that this class will now seek to gain their personal ends and, sheltered within the teachers' organization, bring discredit upon the entire cause. Whether the alliance with labor unions shall work good or ill depends upon the methods they both employ to carry their points. If this step means that it merely gives to the lower elements of both organizations a wished-for opportunity to combine in controlling the machinery of the schools in the interests of their own selfishness, then the result will be evil.

Danger of Cliques

But it is not a foregone conclusion that such will be the case. While the teachers do not possess all the conscience and all the sense in the community, they do have their share of both, and it is not too optimistic to believe that the wisdom of the better element will prevail. As they emerge gradually from under the direct domination of the board and superintendents, they become more and more directly responsible to the people as a whole. To ally themselves with any particular clique or faction, either civil or religious,[2] would be an extremely shortsighted policy, and one which the people at large will not tolerate. They do not need to resort to the tricks of the low politician to gain their ends. They have the ear of the public, and they can get by direct methods whatever they can actually show to be wise. After winning their fight with the tax-dodgers by a struggle in the open field, it would immensely prejudice their cause if they were at this time to adopt the tactics of the pothouse statesman. Yet it seems to be the immediate inference of many people that they have associated themselves with the labor unions that they may the more effectively do that most unwise thing.

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[2] A member of the state legislature at Springfield is reported to have said that he believed every priest in Chicago, presumably at the instance of the teachers, had written him a letter saying that if he supported certain measures favored by the Board of Education, it would mean the abrupt closing of his political career. If true, this is a bad sign.

Character the Anchorage

The teachers have always been supposed to stand for character: never before in history have they had so fine an opportunity to prove it. While the people dearly love to phrase themselves in eulogies on the teacher as the censor and guardian of public morals, the utter hypocrisy of it all — the absolute distrust with which they are regarded — is clearly shown by the fact that almost everybody seems to expect them to become at once the easy prey and pliant tool of the worst elements of labor-unionism. If the public had been really sincere in its eulogies, at this time, it would have some faith, at least, in the power of the teachers to work reform in the methods of labor organizations.

Teachers as Weaklings

The fact is, generally speaking, the teachers have not hitherto counted as a vitalizing, formative influence in community life at all. They have been caricatured in every comic print on the same page with the farmer, the ninny, and all the malaprops of society. No weakling can use suddenly acquired strength without making some false strokes. The teachers have made some blunders, doubtless, and they will likely make still others. But the move that has been made in the direction of securing political power is the first step toward a possible dignity which has heretofore only existed in name. Whether the profession will be really dignified or degraded will depend upon the character that stamps the teachers. There are certain propositions under consideration which must always have their disinterested and unqualified support. The most important are those which relate to the better training, the appointment, the promotion, and the tenure of office of the teachers themselves.

The teachers, however, must not befool themselves into thinking that all of their own number are striving for regulations with an eye single to the good of the schools. They will be wise and more than fortunate if they are able to protect themselves against those who are self-seeking; who would lower standards of professional training; who would make appointments subject to political pull; who would promote on age alone, or who would allow the incompetent to sleep and rot in places made secure by personal favor, without calling for an effort toward self-improvement. That the superintendent is most earnestly striving to strengthen the profession at all of these points no one can doubt. That the best means have yet been devised not even he himself believes But he has done work of lasting value in taking the initiative and in forcing the issues upon the teachers. He proposes to base promotion upon examinations in subjects not always closely related to the work of the teacher in the schoolroom; the test proposed by the teachers is infinitely more difficult—that it should rest upon the character of his professional work. This in time will come, and it will bring culture, too. Nobody can work at one thing and get his culture from another, for culture is always an integral part of real life. In devising the best means for promoting every aspect of their profession, the teachers now have ways open that were never offered before. It is for them to show that they know how to make the wisest use of these opportunities.

Teachers not to be Self-Deceived

Work and Culture

The teachers as well as the superintendents and Board of Education have a right to propose measures relating to the welfare of the schools; but it is the final wisdom of all these that must be crystallized by legislation. The professional, the administrative, and the legislative functions must be clearly recognized and defined in the school system. The professional interests devolve upon the teachers, the principals, and the superintendents; administration rests largely with the board of education, and the machinery necessary to insure the smooth working of the system, without personal, religious, or political bias, should be framed by the legislature of the state. These conditions alone will guarantee the harmony necessary to the highest efficiency of the schools. W. S. J.

Define the Functions

BOOK REVIEWS

Elementary Woodworking. By Edwin W. Foster. Boston: Ginn & Co. Pp. 130.

This little book is one of the most pleasing recent additions to the literature of immediate working value to the student and teacher of manual training. It is printed on a good quality of paper, with clear type and profuse illustrations. To quote the author in his preface: "The function of the text is to supplement the instruction of the teacher. It is intended to gather up and arrange in a logical order the facts which the pupil has already been told. It is believed that the text can be used to the greatest advantage by requiring the pupil to read up the subject presented in class immediately after the close of the lesson."

A departure is made from the majority of books heretofore written on woodworking, by the intentional omission of any suggested series of models; for, as the author explains: "It is hardly possible for any two schools to follow the same series of models. Local conditions necessarily affect the choice of a course, while new and better designs are being brought out continually."

"With the earnest hope that nature-study and manual work may be closely correlated," the writer makes Part II a charming and simple introduction to trees, and to the bark and leaves of each, whose woods are most commonly used in school work. By means of simple language, apt little anecdotes, and good illustrations, the reader finds himself at the close possessing a practical means of recognizing his familiar tree neighbors. A feature which commends itself to the reader is the fact that the writer wastes no time in giving superfluous information.

The book is one to be recommended to any who wish practical aid in woodworking.

Annette Butler.

University of Chicago
School of Education

New Century History of the United States. By Edward Eggleston. New York: American Book Co. Pp. 453, with maps and illustrations. $1.

The preparation of this book was the last literary work of its author. He was convinced that there was a peculiar need of such a history, and he devoted all his energies to supplying it. His purpose was to tell the story of our country so briefly that it might be mastered within the usual time allotted to the study, and yet to preserve its interest unimpaired by condensation. He has succeeded admirably, and the high literary quality of the narrative is a noteworthy feature of the book. He has been especially successful in presenting those facts of the home life of the people and of their progress in civilization which are more essential to their history than any mere record of wars and political parties. One novel feature of the book is a collection of brief biographies of about one hundred of the most prominent men who appear in the history. The illustrations are numerous, and really helpful as well as attractive. The maps are clear and not overcrowded with names and places. This is a well-balanced and impartial history which should have a wide use in upper grammar grades.

Western Educational Helps. San Francisco: Whitaker & Ray Co.

No. 1: *Civil Government Simplified.* By J. J. Duvall. $0.25.

A complete topical analysis is given of the county, state, and nation. The abstracts are so arranged that a pupil may obtain a comprehensive idea of any given subject by a glance at a single page, thus saving much valuable time. A series of questions is given at the close of the book which is designed to give additional help in a thorough study of the subject. The author has had several years' experience as teacher and principal in the public schools of California, and this little book is the direct outgrowth of his actual daily work in the schoolroom from year to year.

No. 2: *An Aid in the Study and Teaching of "Lady of the Lake," "Evangeline," and "Merchant of Venice."* By J. W. Graham. $0.25.

A complete plan of work is given for the study of each poem treated, together with a list of questions carefully selected and calculated to lead the pupil step by step to a clear understanding of each subject. Suitable for use in either grammar or high schools, and a most practical help in teaching literature in the grammar grades.

No. 3: *Grammar by the Inductive Method.* By W. C. Doub. $0.25.

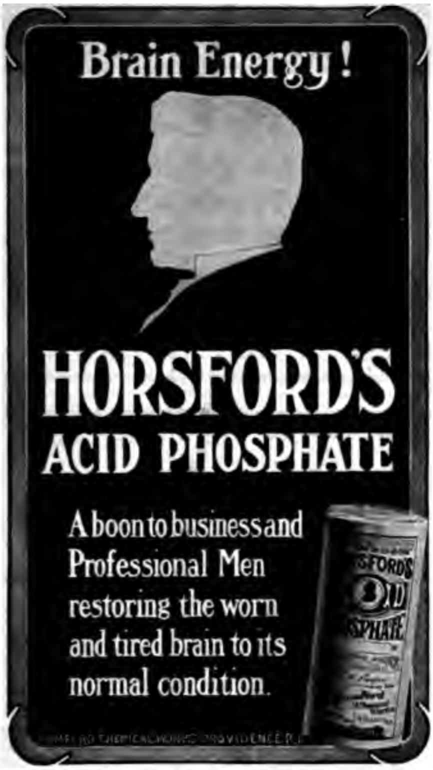
Teachers of language and grammar in all grades will find this little help manual very valuable. The plan provides for the correlation of nature-study, geography, and literature in the teaching of grammar.

No. 4: *Topical Discussion of Geography.* By W. C. Doub. $0.25.

The work outlined calls for a topical study of geography during the last two years of grammar-school work. Instead of asking the pupil to memorize definitions of facts in physical geography, he is required to study and understand a few of those physical conditions which are closely related to man's life on earth, especial emphasis being placed on those conditions which affect his industrial life. The more important facts in the industrial life of society are treated topically, each one being completed before another is taken up.

No. 5: *An Aid in the Study and Teaching of "Snow-Bound" and "The Vision of Sir Launfal," with Complete Text of the Latter.* By J. W. Graham. $0.25.

"Snow-bound" is one of the most difficult of all the modern poems to teach, and the notes and suggestions on this poem will be especially helpful. A full discussion of the ordinary figures of speech is given, the most obscure references are briefly but clearly explained, unusual words are selected for dictionary study, and a full list of questions is given on each stanza, in addition to general questions on the poem as a whole. A careful study of the poem, on the plan outlined, will enable the pupil to read it intelligently and rapidly. A definite plan of work is also given for the study of "The Vision of Sir Launfal." The text of the last-named poem is printed in full, and a copy should be in the hands of each pupil.



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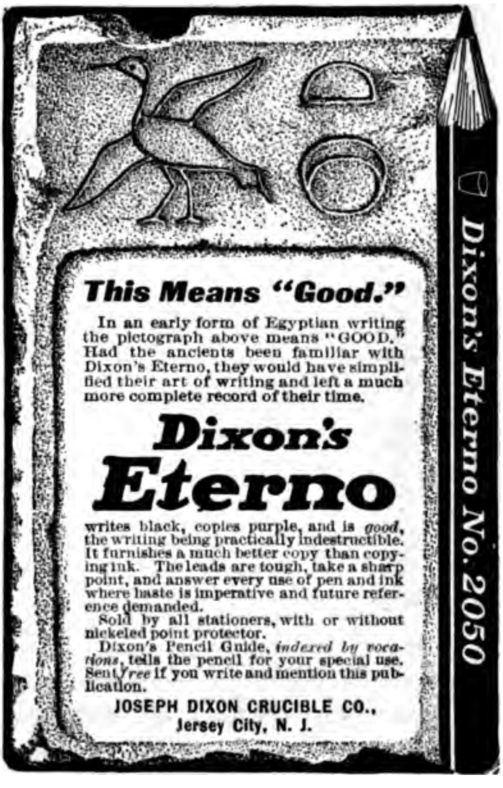

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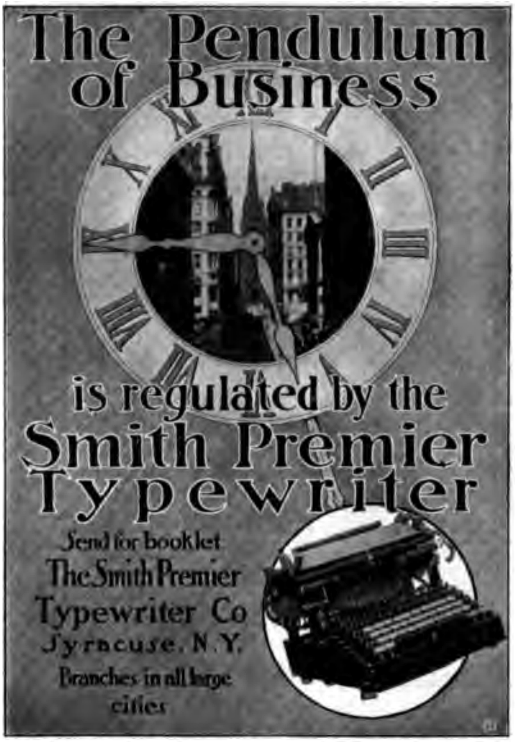

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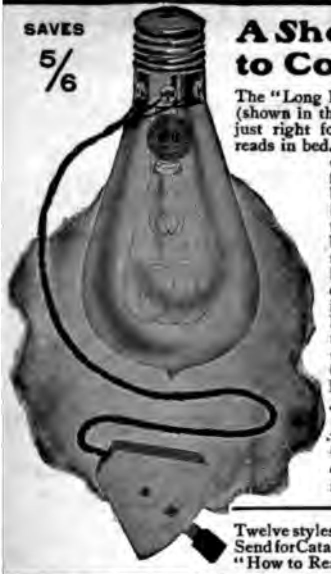

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CONTENTS FOR APRIL, 1905

AMERICAN HISTORY IN THE ELEMENTARY SCHOOLS: A NEW STANDPOINT FOR THE SELECTION OF SUBJECT-MATTER - - - - EMILY J. RICE 449

NATURE-STUDIES WITH BIRDS FOR THE ELEMENTARY SCHOOL ROBERT W. HEGNER 462

A DISCUSSION OF MR. FENOLLOSA'S THEORY OF ART DEVELOPMENT AND ITS RELATION TO CERTAIN PROBLEMS OF ELEMENTARY EDUCATION LILLIAN S. CUSHMAN 473

HAS THE DIVIDING LINE BETWEEN ELEMENTARY AND SECONDARY EDUCATION BEEN DRAWN AT THE PROPER POINT? - - W. C. RUEDIGER 482

ROBERT, CAVALIER DE LA SALLE, ET JOLIET AU CHÂTEAU ST. LOUIS LORLEY ADA ASHLÉMAN 493

COOKING IN THE THIRD GRADE - - - - - - - - JENNY H. SNOW 504

THE MARCH MEETING OF THE PARENTS' ASSOCIATION MRS. FRANK HUGH MONTGOMERY 508

EDITORIAL NOTES - - - - - - - - - - - - WILBUR S. JACKMAN 511

Education as Creation; A False Psychology; Genesis of Imitation in Education; Marks of Creative Work; The Entering Wedge; Constructive Idea Applied; The High-Water Mark; Interest is in Creation; The New Curriculum; History; Science; Art Creations; Creation Transforms; Reforms and Expense; Trained Teachers Needed.

BOOK REVIEWS - - - - - - - - - - - - - - - - - - 517

McMurry: Pioneer History Stories; *Hitchcock:* The Louisiana Purchase and the Exploration, Early History, and Building of the West; *Montgomery:* An Elementary American History; *Eggleston:* Running the River, HARRY O. GILLETT; *Tanner:* Elementary Algebra, G. W. MYERS.

BOOKS RECEIVED - - - - - - - - - - - - - - - - - - 520

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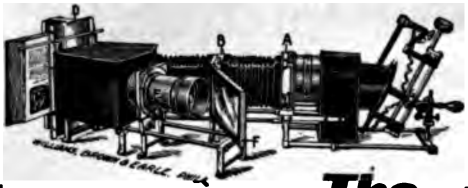
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APRIL, 1905

AMERICAN HISTORY IN THE ELEMENTARY SCHOOLS: A NEW STANDPOINT FOR THE SELECTION OF SUBJECT-MATTER

EMILY J. RICE
Department of History, School of Education

History as a subject of study finds very little place in the elementary schools of this country below the two highest grades. In these grades it receives some attention with a view to the cultivation of patriotism — a purpose almost uniformly assigned. It is evident that parents and teachers believe that a study of American institutions will help the future citizen to fulfil his obligations to the government; that, somehow, knowledge which can find no immediate expression in action will be transmuted long afterward into good citizenship. They see no serious mission for history until the children are old enough to take an interest in political affairs.

It is only recently that the study of economics in higher institutions has placed emphasis upon the fact that political conditions are based upon industrial conditions, and that the steps of reasoning are from geography to industry, and from industry to social life and government. Social science has also shown us that good citizenship depends upon an understanding of industrial and social obligations, as well as of those of a political nature.

We are at the same time studying more carefully than ever before the experiences of the children themselves. We have learned that the logical arrangement of the subject-matter is not necessarily the psychological order, and that the children have certain interests and powers that must be taken into account in directing their study. Psychology turns our attention to the child's experiences as an important factor in determining what he shall be taught. It is only by means of the children's own experiences that they can enter into sympathy with the experiences of the past. The teacher's place is to help them through the study of history to an appreciation of the meaning of their experience.

The child's present life furnishes the key to the phases of history that are immediately useful to him. He has different interests at different stages of his mental growth, but, in general, through the elementary-school period he is active rather than contemplative, and is therefore interested in the activities of others, in the things that are being done about him, and in occupations in which he can himself take a part. The younger children cannot appreciate the political aspects of our nation's history because they have no part to play in national affairs. Their interests, in the elementary school and even in the high school, are not primarily in government. They may occasionally be stirred by an event of unusual importance, as an election; but their chief concern is with those matters over which they have some control. Our children are not called upon to act in reference to political life. They are directly concerned in certain social and industrial conditions, and the occupations of the home and the school furnish many problems that give a basis for the study of conditions in the past. It is chiefly from social and industrial life that we must draw the problems of history that may become the child's own problems.

The tendencies of recent historical study and writing, and the insight into children's interests given us by psychology, agree in pointing the way toward the use of industrial history in our schools, and a gradual development of the knowledge of political history based upon an industrial foundation in the higher grades.

It is necessary, then, that we should change our point of view in teaching. The ordinary way of treating American history after the colonial period is by political parties. We trace the development of our history through those questions that have divided our country into its two leading political camps. Our textbooks are filled with the details of political questions. From the industrial standpoint, we should rather follow the occupation of the country, the movement westward of the people pioneering their way across the continent and developing the resources of the land. Our history is especially that of material progress, and the true story of our nation's life must be told in terms of industrial achievement as a basis for political and social changes. Shaler says:

> It differs from all other invasions of a great land in that it was not a military occupation, but a process of settlement. Although the frontier was the seat of almost constant battle, the warlike element of the great exploit is really its most trifling feature. The true grandeur of the march consists in the fact that it was the ongoing of a civilization; the ax and the plow were the principal weapons which armed the hands of the people.

Industrial history has a special mission to perform in the teaching of American history; for hitherto the annals of our country have suffered in attractiveness by comparison with those of other lands. We have not the long and picturesque development of feudal and Renaissance times. Ours is rather the colder story of struggle under harsh conditions, and of energies consumed in the bare necessities of life. Utility instead of beauty meets us on every page. Under the impulse of industry, we are able to light up this colorless picture by glimpses of the free life of the pioneer and the art of handicraft. We are able to show the wilderness giving way to the garden with the steady march of the frontier, and to touch with as great a heroism the sturdy character of those who conquered the soil of our broad new land as has been given in the past to the invading armies of the Old World.

As an illustration of the opportunities in such a plan of work, let us outline some of the conditions in the industrial development of our country, with their effects upon our political history.

Our people entered the country by harbors and followed the inlets as far as possible. North of New York much good land has been lost to the sea, while south of it much has been reclaimed from the sea — this by the sinking and rising of the coast in recent geological times. New England lost land that would have been valuable for agriculture, and gained harbors; for deeply sunken coasts mean good harbors. The South gained agricultural land, her wide strip of coastal plain, from fifty to one hundred and fifty miles in width — widest in South Carolina. She lost good harbors. To these causes, together with the differences in climate in the two sections, we may trace many of the differences in the historical development of the northern and southern portions of our country.

The Virginians, for instance, found a wide strip of land especially adapted to a product for which there was a great demand in Europe. They, therefore, turned almost their entire attention to agriculture. New England, on the contrary, had a narrow strip of fertile soil, and was chiefly an upland region, formed by the wearing-down of an ancient mountain range. Her people could raise no staple product for which there was a demand abroad, and, therefore, were confined to the small farm with a variety of products.

Virginia could sell her tobacco and bring back from England the manufactured articles needed, taking the tobacco directly from each plantation by means of her river systems, and returning there manufactured articles. It was unnecessary for her to develop manufactures of her own, and therefore there were in that colony very few villages and towns. In New England there was no way of securing these manufactures except by making them, and the rivers furnished excellent water-power for this purpose. It is a glaciated region, and the streams were consequently turned from their original courses, and have worn through obstructions their new channels, often producing waterfalls at unexpected places. Falls are naturally formed at the head-waters of the streams, but here they are often found near the mouths of streams. The water-power, therefore, has an abundant supply of water, and is brought near the harbors from which goods may be shipped. The development of manufactures was for this reason especially aided in New England, and there was a rapid growth of villages and towns. From the excellent harbors, commerce naturally developed. Ship-building and lumbering followed. The fishing was excellent because of the shallow continental shelf found at many points along the coast, and the cool waters. We have, then, in New England a variety of occupations.

In Virginia, because of the plantation life, there was a great demand for labor, and consequently, the system of slavery was fastened upon that region. The labor system tended to fix distinction of classes. The scattered life made a general education difficult, and a well-educated leisure class was the result, with the remainder of the people poorly educated. This fact also helped to make class distinctions still more prominent. Scattered life contributed to the large unit of government, the county system.

In New England the occupation of the people was not such as to give a demand for slavery. The concentration of population made it easy to develop a system of general education, and there was a leveling tendency in this fact, and also in the absence of a special class of laborers. The smaller unit of government naturally developed.

In the seventeenth century the colonists had occupied the coastal plain, and in the first half of the eighteenth they filled up the Piedmont region and were looking over the mountains. They found a great hindrance to their advance in the Appalachian barrier. This mountain system held them near the coast until they had developed strength enough to cope successfully with all other powers. The French had found a region in which there was no such barrier, and had occupied a much greater extent of territory, but they were spread out thinly over it and could not hold it against their more compact neighbors.

The Appalachian mountain system extends from Newfoundland to Alabama — a distance of nearly three thousand miles. It is highest and widest in the South — about three hundred miles wide — and, covered with forests, formed a most formidable barrier. It is also wide in New England, but lower in the central portion. The rivers pay no attention to the direction of the mountains, but cross them at right angles, and it is these that form entrances to the interior. The best of them are in the low central portion. The Hudson, with its branch, the Mohawk, forms a great break through the mountains in their lowest part. The Hudson is a drowned valley for one hundred and fifty miles of its course, or up to Albany. The falls of the Mohawk are an obstruction, and its headwaters, although leading directly westward, if followed, brought the colonists into regions occupied by vigorous Iroquois Indians, and into conflict with the French. Advance was slow in that direction. The Delaware and Susquehanna also break through the mountains, but their heads lie toward the north, and they are shallow and full of rapids. From the South Branch of the Susquehanna and from the Juniata there are water-partings of no great distance to the head-waters of the Ohio. The Potomac is also a drowned river valley for two hundred miles to the falls at Alexandria. The traders of early colonial times were taught by the Indians to go up this river to Will's Creek, where is now Cumberland, Md., and cross by a portage of only fifty-one miles' length, the shortest portage between the Atlantic and the Ohio, to the Youghiogheny, whose waters would carry them to the Monongahela, and thence to the Ohio. This was the road that Washington followed when he built Fort Necessity, and along it Braddock went to his great defeat. It became a very famous road in our history, for in early times it was the most important way to the West.

In 1716 Governor Alexander Spotswood, of Virginia, made his holiday excursion across the mountains. He had with him a party of some fifty Virginia gentlemen, with their black slaves and Indian guides. They took food and wines, and made it a genuine picnic. But Governor Spotswood had a more serious purpose in the expedition, for he wrote of the importance of the English finding the relation of the head-waters of the Virginia streams to the Ohio in order that they might occupy these regions in advance of the French. The Virginians crossed about fifty miles of forest to the Blue Ridge, and went on to the Shenandoah, which Spotswood named the Euphrates. There they buried one of their empty bottles, containing a paper stating that they claimed the country for the king of England. Although this expedition bore no fruit, the valley which they had found was soon to be settled.

Once in the valley, it was much easier to travel north and south than to continue westward, for, lying between the Blue

Ridge and the Alleghany Front, there is a long, continuous valley with low water-partings between streams that flow in opposite directions. This is called the Hudson in New York, the Kittatinny in New Jersey, the Cumberland in Pennsylvania, and the Valley of Eastern Tennessee. It was in this valley that the first settlements beyond the mountains were made.

Between the years 1730 and 1770 there was a great immigration of Scotch-Irish to this country — some half a million people, it is estimated. At the beginning of the Revolution these people made, perhaps, one-third of the population of Pennsylvania, and one-sixth that of all the colonies. They came from the north of Ireland, from that region settled in 1711 by James I, and from those people who had redeemed the land they occupied, and had established important woolen and linen manufactures. In the eighteenth century, their manufactures being interfered with by the English, who were jealous of their success, and their religious privileges being also curtailed, they began coming to this country. They landed chiefly at Philadelphia and Charleston, and showed their sturdy character by advancing at once to the frontier. They moved from Pennsylvania southward and from South Carolina northward, meeting in the Great Valley. Here, in the dense forests, they built forted villages; for the Indians had their trails all through the mountain regions, the Cherokees on the South marching through the valley to reach the Indians of the Northwest. These Indians were very hostile. In their great, square, palisaded villages, with block houses at each corner, the pioneers lived in times of danger, and from these they went out to build their cabins in the clearings which they made in the forests. They were of just the sturdy, earnest character to make a bulwark against the Indians for the weaker people of the coasts, and they were the best advance guard to creep over the mountains and occupy the western plains. Their frontier life inclined them toward democratic feeling, their occupations were more like those of the northern people than like those of the South, and their ideas considerably modified the aristocratic tendencies of Virginia. It is possible that their influence may be felt in such acts as the overthrow in Virginia of the relation of church and state, and the laws of primogeniture and entail.

To cross the Alleghany Front and the plateaus to the west by the northern routes, the Mohawk or the Potomac even, was to come to the country of the northwestern Indians, who were very hostile and savage—the Delawares, Shawnees, and Miamis. To cross them by the southern route along the Tennessee at the southern end of the mountains was to meet the Cherokees, who were more advanced than the northwestern Indians in culture, more given to agriculture, and less warlike, but more numerous. West of the Cherokees lay the other tribes of the Southwestern Confederacy—the Chickasaws along the Mississippi, the Choctaws to the east of them, and the Creeks still farther eastward, with the Seminoles in Florida. But between these northern and southern gateways was a wind-gap, the Cumberland. This led directly to a region unclaimed by the Indians except as a hunting-ground. The Indians north of the Ohio and south of the Tennessee met here in their search for game, and often also in battle. It was a fine hunting-ground, because the animals were attracted by the good grass and the salt licks. Beyond the deep forests which lay for two hundred miles from the settlements, there were open groves with rich grass, for this was the famous "blue grass" country, the limestone region of Kentucky. Here the ground was often lowered for miles by the animals licking the salty earth. The forests had not been destroyed, as was the case in the Northwest, where the Indians burned the trees to give pasturage for the buffalo.

This was the region of least resistance, and so was first settled. In 1768 the Iroquois granted the land between the Ohio and the Tennessee to the crown. This grant, however, the other Indians would not recognize. In 1769 Boone went through the Cumberland Gap, where he followed the buffalo trails and Indian traces, and found the good hunting-grounds of which he had heard. He remained away from home two years, but was finally led to return by Indian hostility. It was not until 1774 that in Lord Dunmore's War the northwestern Indians were so humbled by the Virginians as to grant the land between the Ohio and the Kentucky to them.

Immediately Henderson, who wanted land for speculation, went among the Cherokees and induced them to sell him practically the same land for the consideration of ten thousand pounds worth of goods. The way now seemed open, and in 1775 Boone led his company of thirty men to Kentucky, blazing a path as he went, and established on the Kentucky River a forted village. Henderson followed with a party of settlers, a government was formed, and a colony started two hundred miles from the frontier. Four years later Ferguson began the settlement of Tennessee. These western settlers made their own surveys of land and protected themselves in their forted villages. Their settlements were individual undertakings. In 1778 George Rogers Clarke started from Kentucky and conquered the forts of the Illinois. Thus we were adding occupation and conquest to our other claims upon the West, at the same time that we were fighting for independence.

At the close of the Revolution the West was ours to the Mississippi and the Great Lakes — a territory greater than that of the original thirteen states. As the states had yielded individually their claims to land north of the Ohio to the general government, this was a public domain, and it was of great service in helping us to meet our debts to the revolutionary soldiers, and it also gave us a common interest. This territory being in the hands of the general government, it was organized by the government, surveys were made, officers were appointed to control it, and forts built to hold it. The conditions for settlement here were quite different from those governing previous settlers in the West, who, as groups of individuals, had been obliged to protect themselves.

Before the officers appointed by the government could reach the territory, the Ohio Association, a company of revolutionary officers from New England, had entered it. They traveled across the Hudson and on by way of the Great Valley to the Braddock Road, then down the Ohio from Pittsburg, and settled at Marietta. From this time on flat boats were constantly descending the Ohio, bringing settlers into the new country. Not until 1795. when the English gave up the forts on the lakes, was the northern route used. Cleveland was settled in 1796 by the Connecticut Land Company, which reached it by way of the Mohawk Valley.

Natural highways are of great importance to the settler, and they are no less important in trade. As soon as the westerners raised more than they needed for themselves, they sought a market. Trade seeks the nearest channels, and in the West these were the streams that flow to the Ohio and the Mississippi. Before 1783 they had established quite a lively intercourse with New Orleans, and flat boats drifted down the Ohio and the Mississippi laden with the products of their farms. Flat boats were usually used because it did not pay to make keel boats. Going downstream was easy, but upstream very difficult, and it was wiser to destroy their boats at the end of the journey than to build better ones. In spring, when the river was high, it took perhaps seven or eight days to go from Pittsburg to the falls of the Ohio, about one thousand miles, and twenty days from the falls to New Orleans. But boats were often ten weeks returning from New Orleans to the falls. The traders usually destroyed their boats at New Orleans and made their way home as best they could, often by way of Havana. Getting money for their goods at New Orleans, they would buy manufactured articles in the eastern cities and transport them over the mountains. Distance from the East developed manufactures early in the West.

Could this trade have been followed without interruption, the westerners would have felt satisfied, but after the Revolution the Spanish cut off their use of the Mississippi. Spain claimed the territory on both sides of the Mississippi to Kentucky, and would not allow the Americans the freedom of navigation of the river. This aroused much feeling, and when, in 1787, Jay was ready to make a treaty yielding the right of navigation of the Mississippi for commercial privileges, the westerners were strongly in favor of revolt. Since they looked to their parent-states in vain for relief from these and other grievances, efforts to found new states were the result, and finally intrigues with Spain and England; for England held a position on the north similar to that of Spain on the south. Until the treaties of Jay and Pinckney, in 1795, there was much friction between the two sections. In 1803 the Louisiana Purchase made a final settlement of the difficulty. The Mississippi was no obstacle to the advance of the Americans, and their rapid expansion made control of the river basin a necessity.

In 1811 the steamboat appeared on the Ohio, and in 1815 a steamboat made its first trip from New Orleans to the falls in twenty-five days. Indeed, the demand for a method of navigation upstream on the Mississippi stimulated attempts to perfect the invention. Now the West could buy in New Orleans, and was comparatively independent of the East. This caused great consternation in Baltimore, Philadelphia, and New York. The gradual demands of foreign trade proved still further the necessity for communication between the East and the West, and its result was the Cumberland Road and the Erie Canal. When Ohio was admitted to the Union in 1803, the government allowed 5 per cent. of the sale of her public lands to be given to her, three-fifths to be used for making roads within the state, and two-fifths for those connecting with the East. Indiana, Illinois, and Missouri had the same grant. The road between Cumberland and Wheeling was selected for improvement and was finished to Wheeling, 141 miles, in 1820. It was continued through the capitals of the states — Columbus, Ohio; Indianapolis, Ind.; Vandalia, Ill. — and its crossing into Missouri at St. Louis was opposed in a long controversy by Illinois. Macadam had now done his notable work in roadmaking, and the extension from Wheeling was made according to his principles. The whole was more than eight hundred miles in extent. The war of 1812 having shown the necessity for control of an inland waterway, and the route through New York being especially favorable for trade, the Erie Canal was projected and carried to its completion in 1825.

Now New York had the advantage of the other cities of the East, and in 1826 a canal was begun from Philadelphia to Pittsburg. In 1832 the horse railroad came into use, and this route when finished was partly railroad. The same was true of the road started from Baltimore in 1827. Now began a rage for canals and internal improvements, followed by much speculation, which ended in the panic of 1837. Disastrous as was this end, the movement had done much to unite our country and develop its resources. The railroad completed the unification of the north which had been begun by roads and canals. The glacial region was made one in industrial and political conditions as it was geographically.

Meanwhile the South was being unified by the growth of the cotton industry. Cotton had not been an important product of colonial times, but the Revolutionary War was accompanied by an industrial revolution in which cotton took the lead. The invention of the spinning-jenny and the power-loom made the beginning of the factory system. At the close of the Revolution the demand came for a supply of cotton, and America undertook to meet this demand. In 1786 "sea island cotton" was introduced from the Bahamas. It was especially long-fibered, silky, and easy to clean, and a ready market was secured for it. It was found not to grow on the uplands, so experiments were made to find a cotton that could be grown there. The upland cotton grown in colonial times was short-fibered, black-seeded, difficult to clean, and not very white. A cotton was finally obtained which was short-fibered, green-seeded, difficult to clean, but whiter; and this became the upland cotton of the South. The invention of the cotton-gin removed all difficulties, and the culture of this cotton spread across the South. The cotton belt made a division of our country at the Ohio, and caused the attempt to keep the balance of power by admission to the Union of one southern to each northern state, as Indiana in 1816, Mississippi in 1817, Illinois in 1818, Alabama in 1819, and Missouri in 1820.

The Civil War was also an industrial revolution and, since it occurred, the labor conditions of the South are growing more like those of the North. Finding coal and iron near her raw materials, the South is learning to manufacture, and the differences between the two sections are disappearing.

We have had one more barrier to cross, the Rockies, the broadest of all. Slowly the hunter and trader made their way into these mountains, and opened up the great trails across them. Discovery of gold led to a rapid settlement beyond the barrier. The political question that grew out of this advance of our frontier was: Could the Pacific slope be held to the East? As late as 1846 a South Carolina senator said in Congress that it would be impossible for Oregon ever to be represented in Congress, as it would take ten months for one to travel from Oregon to Washington to represent it. It was the fear of losing the Pacific coast, or the threats of its people to set up a government of their own during the Civil War, that led our government to assist the building of the first railroad over the mountains. Six lines now cross them, two over practically each of the three great trails to the West. Railroads have overcome this barrier and held the Pacific to the East. They have broken down geographical barriers, made our country small, and unity possible. The great breadth of our territory rendered large engineering projects necessary, and consequently the railroad-building of America is especially celebrated. These railroads have in turn reacted upon the country to make it small and compact for political purposes.

To quote from Shaler in conclusion:

> While much must be allowed for the influence of the steamboat and the railway on the swift settlement of the Mississippi Valley, a great deal of this swiftness of movement has been due to the long education of our people in the work of subjugating a new country. This education has included a training in self-reliance which is necessary for men who are to do duty as frontiersmen. They must know the art of winning an immediate subsistence from the soil, as well as how, in the midst of other cares, to frame and consolidate their social and governmental systems. These lessons the Americans have learned in a measure which has been obtained by no other people.

NATURE-STUDIES WITH BIRDS FOR THE ELEMENTARY SCHOOL

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[Continued from the March number]

III. BIRD DAY

Bird Day is the day on which the children welcome the birds that have returned from their sojourn in the South. Part of the day should be spent out of doors and part of it in the schoolroom. An excursion into the country in the afternoon, with the purpose of studying the habits of birds and of making a list of those observed, brings the children directly in touch with nature and admirably realizes the spirit of the day. Exercises should be held in the schoolroom in the morning. The walls may be decorated with portraits of noted bird-lovers, bird charts made by the children, and colored pictures of birds. A portion of the room may be reserved for an exhibit of old bird-nests and specimens of bird-houses. The program should be composed of numbers especially prepared by the children as the results of the year's work with the birds. It should not be so long as to tire the hearers. The following list of subjects will suggest the nature of the exercises:

PROGRAM FOR BIRD DAY

1. Songs about birds. (Some of these may be composed by the children and may include the call notes of different birds.)
2. Reading of Senator Hoar's petition of the birds to the Legislature of Massachusetts.
3. Résumé of bird laws of the state.
4. The history of Bird Day.
5. Essays about birds.
6. Bird proverbs.
7. Poems by the best authors.
8. Impersonations.

9. Stories about, or written by, famous bird-lovers.
10. Formation or report of the Audubon Society.
11. Song.

Many of the subjects listed above call for detailed personal observation; others will be fully discussed in a future number of the *Elementary School Teacher,* and several important ones are considered below.

1. *Petition of the birds.*—This was written by Senator Hoar and helped to pass the law in Massachusetts prohibiting the wearing of song and insectivorous birds on women's hats. It reads as follows:

To the Great and General Court of the Commonwealth of Massachusetts:

We, the songbirds of Massachusetts and their playfellows, make this our humble petition. We know more about you than you think we do. We know how good you are. We have hopped about the roofs and looked in at the windows of the houses you have built for poor and sick and hungry people, and little lame and deaf and blind children. We have built our nests in the trees and sung many a song as we flew about the gardens and parks you have made so beautiful for your children, especially your poor children, to play in. Every year we fly a great way over the country, keeping all the time where the sun is bright and warm. And we know that whenever you do anything the other people all over this great land between the seas and the Great Lakes find it out, and pretty soon will try to do the same. We know. We know.

We are Americans just the same as you are. Some of us, like you, came across the great sea. But most of the birds like us have lived here a long while; and the birds like us welcomed your fathers when they came here many, many years ago. Our fathers and mothers have always done their best to please your fathers and mothers.

Now we have a sad story to tell you. Thoughtless or bad people are trying to destroy us. They kill us because our feathers are beautiful. Even pretty and sweet girls, who, we should think, would be our best friends, kill our brothers and children so that they may wear our plumage on their hats. Sometimes people kill us for mere wantonness. Cruel boys destroy our nests and steal our eggs and our young ones. People with guns and snares lie in wait to kill us; as if the place for a bird were not in the sky, alive, but in a shop window or in a glass case. If this goes on much longer, all our songbirds will be gone. Already we are told that in some other countries that used to be full of birds they are now almost gone. Even the nightingales are being killed in Italy.

Now we humbly pray that you will stop all this and save us from this sad fate. You have already made a law that no one shall kill a harmless songbird or destroy our nests or our eggs. Will you please make another one that no one shall wear our feathers, so that no one shall kill us to get them? We want them all ourselves. Your pretty girls are pretty enough without them. We are told that it is as easy for you to do it as for a blackbird to whistle.

If you will, we know how to pay you a hundred times over. We will teach your children to keep themselves clean and neat. We will show them how to live together in peace and love and to agree as we do in our nests. We will build pretty houses which you will like to see. We will play about your garden and flower-beds — ourselves like flowers on wings, wthout any cost to you. We will destroy the wicked insects and worms that spoil your cherries and currants and plums and apples and roses. We will give you our best songs, and make the spring more beautiful and the summer sweeter to you. Every June morning, when you go out into the field, oriole and bluebird and blackbird and bobolink will fly after you and make the day more delightful to you. And when you go home tired after sundown, vesper sparrow will tell you how grateful we are. When you sit down on your porch after dark, fifebird and hermit thrush and wood thrush will sing to you; and even whip-poor-will will cheer you up a little. We know where we are safe. In a little while all the birds will come to live in Massachusetts again, and everybody who loves music will like to make a summer home with you.

The signers are:

Brown Thrasher
Robert o' Lincoln.
Hermit Thrush
Vesper Sparrow
Robin Redbreast
Song Sparrow
Woodpecker
Indigo Bird
Chickadee
Kingbird
Swallow
Martin
Chewink
Vireo
Oriole
Blackbird
Wren
etc.

2. *The history of Bird Day.*—The first Bird Day in the schools was celebrated at Oil City, Pa., on the first Friday in May, 1894. Mr. C. A. Babcock, superintendent of schools in the above-named city, is responsible for its existence. He noticed the interest of the children in their nature-studies with birds, and suggested that a day be appointed to be celebrated as *Bird Day.* Favorable responses were received from Hon. J. Sterling Morton, John Burroughs, Olive Thorne Miller, Bradford Torrey, and other prominent ornithologists. So successful has the celebration become that it is being observed in connection with Arbor Day in many of the states. For a full account of Bird Day see *Bird Day, How to Prepare for It,* by C. A. Babcock.

3. *Essays about birds.*— A few of many possible subjects for essays about birds are considered below.

a) Aims and purposes of Bird Day. Circular No. 17 sent out by the U. S. Department of Agriculture says in part:

> Briefly stated, the object of Bird Day is to diffuse knowledge concerning our native birds and to arouse a more general interest in bird protection. As such it should appeal not only to ornithologists, sportsmen, and farmers, who have a practical interest in the preservation of birds, but also to the general public, who would soon appreciate the loss if the common songsters were exterminated.

The above circular should be consulted in preparing this essay.

b) The benefits of birds. This subject, as well as the next four, is to be taken up in detail in the *Elementary School Teacher* for May, and need not be discussed here.

c) Bird enemies.

d) How to attract birds.

e) How to protect birds.

f) Report on the decrease of birds.

g) Birds that sing on the wing.

h) The flight of birds.

i) Bird migration.

j) Bird nests.

k) How birds feed their young.

l) Stories of bird life-histories as personally observed.

4. *Bird proverbs.*

"Birds of a feather flock together."

"A bird in the bush is worth two in the hand."

"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."

"I will not kill or hunt any living creature needlessly or destroy any beautiful thing, but will strive to save and comfort all gentle life and guard and perfect all natural beauty upon the earth." — Seventh Article of Creed of St. George's Guild; RUSKIN

"Hast thou named all the birds, without a gun?
Loved the wood-rose, and left it on its stalk?
. . . .
O, be my friend, and teach me to be thine!"— EMERSON.

5. *Poems by the best authors.*— The birds have received their just praise from the poets, and there is hardly one who has not taken some beautiful flying creature as his theme. The following are good: "Robert of Lincoln," Bryant; "The Return of the Birds," Bryant; "To the Skylark," Wordsworth; "The Veery," Van Dyke; "The Falcon," Lowell; "Forbearance," Emerson; "The Eagle," Tennyson; "The Birds' Orchestra," Celia Thaxter; "What the Bird Said," Whittier; "Ode to a Nightingale," Keats; "The Mocking Bird," Sidney Lainer.

6. *Impersonations.*— These are real tests of the knowledge of birds possessed by the children. The pupil selects the bird he wishes to personate and, after telling all about himself, asks for his correct name. This is a sample:

"One morning bright and early I noticed several people invading my usual feeding-grounds. They carried queer shiny, yellow sticks, which they occasionally looked through. They leveled them at me in an endeavor to discover my name. I will describe myself as they saw me: I am a little larger than an English sparrow. My entire head and neck is red; my back and the front part of my wings are blue-black; my breast and part of my wings are white. This makes me appear very patriotic, as if colored with bands of red, white, and blue. I climb up the trunks of trees and catch the naughty insects that are trying to destroy them. When I find a hard, resonant stub or telephone post, I like to drum on it with my chisel-shaped bill. My eggs are laid on the chips in the bottom of a hole that I dig in a tree. They are five or six in number, and are white. What is my name?"

7. *Formation or report of the Audubon Society.*— For the past thirty years there has been a marked increase in the number of people who recognize the fact that the unlimited destruction of birds will result in disaster to the agricultural interests of the country. Strong efforts have been made to prevent the decrease of our feathered friends. Many individuals long ago worked at this problem, but organization was found necessary for the accomplishment of any lasting benefits. The first organization for this purpose was called the Audubon Society. Several para-

graphs from an editorial in *Forest and Stream,* February 11, 1886, p. 41, will best explain its object:

> In the first half of this century there lived a man who did more to teach Americans about birds of their own land than any other who ever lived. His beautiful and spirited paintings, and his charming and tender accounts of the habits of his favorites, have made him immortal, and have inspired his countrymen with an ardent love for the birds. The land which produced the painter-naturalist, John James Audubon, will not willingly see the beautiful forms he loved so well exterminated.
>
> We propose the formation of an association for the protection of wild birds and their eggs, which shall be called the Audubon Society. Its membership is to be free to everybody who is willing to lend a helping hand in forwarding the objects for which it is formed. These objects shall be to prevent, so far as possible, (1) the killing of any wild birds not used for food; (2) the destruction of nests or eggs of any wild bird; and (3) the wearing of feathers as ornaments or trimming for dress.

This editorial resulted in encouraging letters from many prominent men, among them John Burroughs, Bishop Henry C. Potter, John G. Whittier, and Henry Ward Beecher. The *Audubon Magazine* was established in January, 1887; but lasted only two years. In 1896 there was a revival of the Audubon movement, which has resulted in the formation of over thirty state Audubon Societies and countless local societies. On January 5, 1905, the National Association of Audubon Societies for the Protection of Wild Birds and Animals was incorporated for the following objects:

a) To hold meetings, lectures, and exhibitions in the interest of the protection of wild birds and animals, and to use all lawful means for their protection.

b) To publish and distribute documents and other printed matter on these or other objects, and to acquire and maintain a library.

c) To co-operate with the national and state governments, and regularly organized natural-history societies, in disseminating knowledge relative to wild birds and animals.

The aims of the corporation are:

a) To organize, foster, and strengthen state and local Audubon Societies.

b) Permanently to maintain and greatly enlarge the number of wardens now guarding colonies of breeding birds.

c) To increase, in rural districts, circulating nature-book libraries.

Individual efforts to protect birds are of value, but the greatest good is possible when many are working together. An Audubon Society in the school would organize the bird work and turn the minds of the children into the proper channels. For information as to the formation of societies write to the secretary of the state society. The addresses of the state secretaries as well as a full account of the Audubon movement will be found in *Bird-Lore* for January-February, 1905.

8. *Stories about, or written by, famous bird-lovers.*—These may be found in biographical works and in the works of the authors themselves. Some of the best-known ornithologists are: John J. Audubon, Alexander Wilson, John Burroughs, Charles Bendire, Bradford Torrey, and Olive Thorne Miller.

IV. ARBOR DAY

We find from the study of the methods of attracting birds that the planting of trees is intimately associated with the abundance of bird neighbors. Many states set aside one day each year on which to celebrate the planting of trees and the study of birds, calling it Arbor and Bird Day. It has not been thought advisable to unite the two here, but to take up each day separately, a joint program being very easily arranged from these, if necessary.

Lowell says: "I think no man does anything more visibly useful to posterity than he who plants a tree." Most people, as did Lowell, recognize the beauty and the value of trees, but they do not seem to realize that they should each contribute to the cause of arboriculture. I need not dwell upon the importance of teaching the children to protect the trees already planted and to look forward to good results in the future. When a child has taken care of a tree, has watched its advancement year after year, and has learned its method of growth, he has become a potent factor in the struggle for the salvation and future increase of our forests. Another fact makes Arbor Day an important time of celebration: if we expect to enjoy the company of birds, we must provide trees and bushes where they can hide, build nests, and find food. In selecting trees to plant, we should have these points in mind, and thus not alone accomplish the beautifying of barren plots, but also help populate them with living, singing creatures.

Arbor Day should be celebrated with exercises similar to those held on Bird Day. There should be an outdoor and an indoor program. The exercises out of doors should consist in the planting of trees and bushes. The material for the indoor program is so accessible and various that no trouble should be experienced in arranging it. The following is given as a sample, some of the important items being taken up separately afterwards:

PROGRAM FOR ARBOR DAY

1. Songs about trees.
2. Reading of proclamation of the governor of the state.
3. History of Arbor Day.
4. Essays about trees.
5. Songs.
6. Recitations.
7. Essays about shrubs.
8. Appointment of committee to look after trees planted.
9. Song.

1. *Songs about trees.*— Many songs have been written about trees, and while learning these the children grow into the spirit of the day. Where it is possible, poems may be put to music by the children especially for the occasion.

2. *History of Arbor Day.*— Arbor Day was founded by Hon. J. Sterling Morton. Its history is comprehensively given by N. H. Egleston in a treatise on *Arbor Day: Its History and Observance,* published by the U. S. Department of Agriculture in 1896. The following letter from the founder is interesting. It appeared in *Country Life in America,* May, 1902, and is here reprinted by permission of Doubleday, Page & Co.:

LETTER FROM HON. J. STERLING MORTON, FOUNDER OF ARBOR DAY

My object in establishing Arbor Day was to concentrate the public mind on a given date upon the absolute necessity of tree-planting in all the prairies of the trans-Missouri country. On January 4, 1872, it was suggested, at the meeting of the Nebraska State Board of Agriculture, when I offered the resolution creating this anniversary, first, that the name be changed to "Sylvan Day," instead of Arbor Day. That I opposed, upon the ground that the latter phrase covered all trees and the former only forest trees, and so the amendment was lost. In Nebraska the anniversary has accomplished much more than I dared to hope it would accomplish at its birth, thirty years ago last January. The public mind has been centered upon that day upon the importance from an economic, as well as from an æsthetic, standpoint of arboriculture. Governor R. W. Furnas, of the State Board of Agriculture, has statistics which prove that some billions of trees have been planted on that day during the last thirty years.

The celebration of this anniversary, which is the only one thus far instituted which looks entirely to the future instead of to the past, can be made more and more practical as the science of tree-planting, and its necessity, are thoroughly discussed and inculcated in the common schools of the country. Having just returned from a sojourn in old Mexico, where I have traveled during the last thirty days more than four thousand miles, I am pleased to refer you to chap. 1, p. 9, of the *Conquest of Mexico,* by Prescott. There he says: "In the time of the Aztecs the tableland was thickly covered with larch, oak, cypress, and other forest trees, the extraordinary dimensions of some of which remaining to the present day show that the barrenness in later days is chargeable more on man than on nature." Agreeing perfectly with this view, Mexico is a desolate warning to the tree-destroyers of our own country and in Europe. Spain, more than any other country, shows the inexorable penalties which are visited upon a land inhabited by a people who destroy and never replant forests.

J. STERLING MORTON.

3. *Essays about trees.*

a) Celebrated trees. The Washington Elm is an example of a celebrated tree. Its history is very interesting. Holmes's poem "Under the Washington Elm" may be read in connection.

b) How to plant a tree. The chief features of the operation are as follows: Select straight, thrifty, young trees from the nursery or from open places in the forest. Dig up the plants with all the roots available. Cut off smoothly all broken or severed roots, making the cut surface slant from below, up and outward. Perhaps half of the roots have been sacrificed in digging up the tree, which makes it necessary to remove about half of the top. Make the hole wide enough to receive the roots without doubling. Place the tree in the hole in as nearly the position it had originally as possible. Pack fine soil firmly about the roots. When the hole is almost filled with soil, shake the tree several times to settle the earth, and pour in water. Fill up the hole, and place straw or coarse manure on top to retain the moisture.

c) Best trees to plant. The kind of tree planted is important, as the ornamental, shade, bird-attractive, and other qualities must be taken into consideration. The many books on arboriculture furnish all necessary subject-matter for this essay.

d) How to improve the school-ground.

e) Trees and their relation to birds. Mr. Lange treats this subject fully in his book on *Our Native Birds: How to Protect Them and Attract Them to Our Homes.* The following trees and shrubs are selected from his list of those that provide food for birds:

(1) White cedar and red cedar.
(2) Wild haws.
(3) Wild cherry.
(4) Virginia creeper.
(5) Wild grape vine.
(6) Wild currants and gooseberries.
(7) Elder.
(8) Sumach.
(9) Gladiolus — for Humming birds.

f) Best trees to plant for ornamental purposes.

g) Commercial value of trees.

h) Influence of forests on climate.

i) How a tree grows.

j) My favorite tree.

k) The parts of a tree and their uses.

4. *Recitation.*— Space will permit mention of only a few of the selections suitable for readings: "A Forest Hymn," Bryant; "Woodman, Spare That Tree," Morris; "The Oak" and "Under the Willows," Lowell; "Nature's Book," Longfellow; "Plant Trees," Whittier; "When the Green Gits Back on the Trees," Riley; "Under the Washington Elm," Holmes.

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A DISCUSSION OF MR. FENOLLOSA'S THEORY OF ART DEVELOPMENT AND ITS RELATION TO CERTAIN PROBLEMS OF ELEMENTARY EDUCATION

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School of Education

In his lecture on "The Structural Basis of Art"[1] Mr. Fenollosa presents a view of art evolution strikingly at variance with that commonly accepted. In stating his thesis he says:

> It has been held by some people in America, and I think it is held by the majority of the public, that the real root of art development and of art power lies in representation. That is the old orthodox view. . . . . All the histories of art that exist assert that it is the development of more and more perspective, more and more elements of realistic impression, that constitute the arts in our time. What I wish to say is that this is not true in the history of human art.

Enlarging upon this theory, he adds:

> The proposition I am going to make is that the real power of man over the elements of art structure comes, not from the representative element, but from the structural element; that it comes from what we do with material things in their actual human and social uses — textiles, clay, wood, stone, metal — all of these substances; and what renders their human forms agreeable to us is the application of pattern to them, if you like.

Again he states:

> What has made the finer and finer line from the realistic side of the drawing is not the realistic motive, but the desire to find finer and finer space-relations and line-relations. . . . . In other words, I would hold that the realistic development grows out of the desire for the finer and finer decorative motive.

In his slides Mr. Fenollosa drew from a range of material that included the most typical phases of art development. It is a pity that this most convincing part of his argument could not accompany the stenographic report of the lecture.

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[1] See Ernest Fenollosa, "Fine Arts," *Elementary School Teacher*, September, 1904.

This theory of art evolution marks out for an educational system a line of development in control quite different from the old ones. It makes the æsthetic element a dominant factor from the beginning. It places at least a slight emphasis at once upon the elements of visual art, viz., line, dark and light, and color.

Concerning the art-growth of the individual, I should like to ask the question: How is it possible for the realistic development to grow out of a desire for the finer and finer decorative motives; and, if so, how would it modify present conditions? The graphic arts interpret to the eye through symbols of images, visually derived. Artistic development requires the continuous growth of adequate visual power. The danger is great of the child's acquiring a number of symbols which by constant repetition without growth become automatic and end in arrested development.

The world that makes itself known to us through the eye may primarily be one of color. Color, however, as an attribute of matter, is subject to limitations of form and space. Hence one may compare the world of vision to a color mosaic. Through the variations of matter some shapes are dark, some are light, some are of one hue and others of another. By correctly defining color limits one also defines form and space. A receding road appears as a wedge-shaped area related in certain definite ways to other shapes. The distant objects of a landscape appear as color shapes, less intense than near details, but still as clearly defined areas. The third dimension is everywhere evident through the variations of light and dark shapes, and through the spaces into which it is cutting surrounding areas. To interpret in terms of the visual, things must be perceived as if one were looking through a window or at a mirror on which the subject is projected. Children often see color and yet render it as a formless mass. We all know the child who covers his paper with a smudge of red paint and calls it an apple. It is only after he has reinforced the notion of its color by his sense of the feeling of the apple that he can completely define his image. It would seem, therefore, that to be a perfect visualist would be to possess perfect co-ordination of visual and motor sense. I apply the term "visualist" to people from whom seeing stimulates a response in terms of color shapes. I have found about one child out of thirty to react in this way. Seeing with the others is so imperfect that it serves merely to present to the mind a symbol of a motor experience. These motor images seem to get in the way of a direct visual impression. We know from such experience that a road is miles in length, and that it is on a flat plane. We know that the table has thickness. It is impossible for the majority of people to forget these facts, or to relate them properly to others, and to see these things as projections.

I have tried to indicate that if there is to be continuous growth through art-expression, the child must become more and more conscious of these visual facts. Attention must in some way be directed to variations of tone, to variations of size, and to variations of shape. Here is the weak point in past methods, both pedagogic and unpedagogic. Between the years of six and twelve the increase in the power of seeing is not usually proportionate to the development along other lines. When the art element has been omitted, one of two interests has usually been depended upon: either the interest in things and their correct representation, or the interest in idea and its expression. Is the weakness due to this fact? Very imperfect and conventional symbols serve to call up associated ideas. Measured by a standard which makes expression of ideas the only aim, the child's crudest effort is adequate. A line at the top of the paper for sky, and one at the bottom for ground, express perfectly his notion of the distance between earth and sky. The desire to express idea alone does not afford the key to legitimate interest in space-art.

In Fig. 1 of the iris I have attempted to indicate by dotted lines a few of the many comparisons which would be made by the draftsman in the process of making an accurate drawing from the plant, when attention is focused entirely upon the problem of representation. First, the form of the group as a whole is noted, as if inclosed in Fig. *A, B, C,D, E*. The proportion of height and width of the group is determined by comparison of *CF* and *DG*. The position of *E* is determined by its vertical relation to *AC*, as at *K*. The whole is next broken up into its most important subordinate parts. The shape of the flower is defined as *CDNLM*.

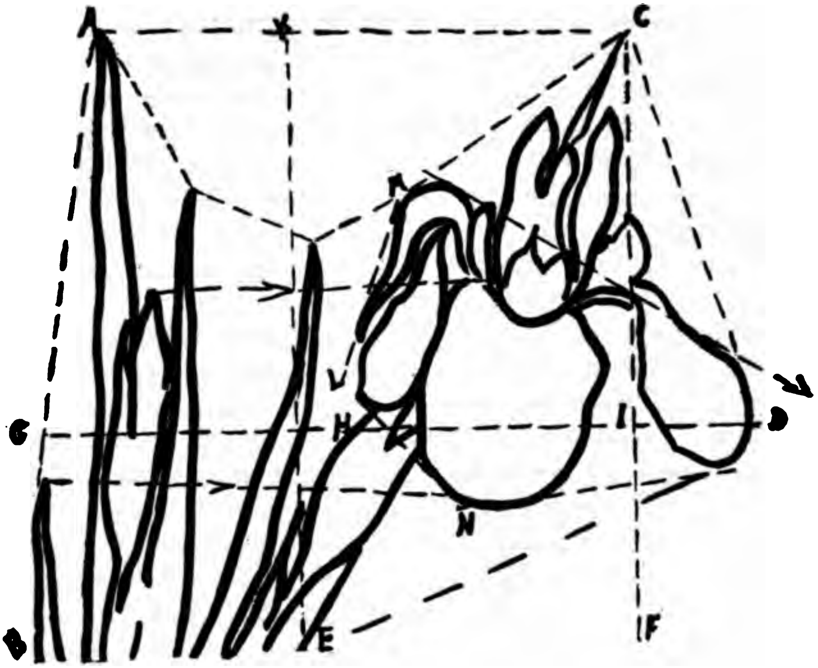

FIG. 1

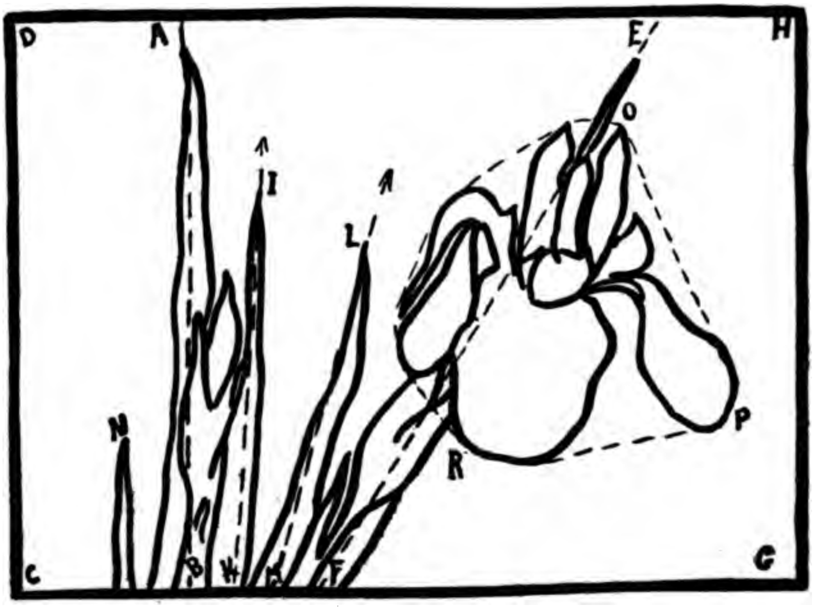

FIG. 2

The width of the flower *DH* is compared to the length of the line *CF*. This process of relating one set of details to another by noting common direction and relative proportions is followed till the minutest parts are accurately placed. This process is deductive, and is fitted only to a mature mind. It is a power not gained, without great loss of energy, much before the fifteenth year. It is the method by which the average art student sits down with plumb-line and spends weeks in laborious analysis of the immovable cast. It is the method which belongs pre-eminently to a period of conscious study and analysis. It is neither the process by which the child interprets naïvely his imperfect impressions, nor is it the method by which the artist who has mastered his processes, till they have once more become unconscious or instinctive, interprets the ever-changing phenomena of living things. Owing to the inability of the young mind to make the close analysis of form which is indicated in the illustration, when we concentrate the attention upon things and their representation, we are holding up a standard which is beyond the child's mental powers. Moreover, it is a question whether, if it were not so, in the desire to reproduce an object merely, there would in early years arise a motive strong enough to make him try to master so much drudgery. While they are not capable of close analysis, children of ten are conscious of result as result. Measured by a standard which makes representation the highest aim, their efforts must seem inadequate. Hence artistic activities end too often in dissatisfaction and disgust at a period when they would be most beneficial as emotional safety-valves. One naturally questions whether it be possible that there would normally occur a chasm so wide that development would practically be suspended. In the Laboratory school we found that this break did not occur in the crafts. In the case of the textiles which were most thoroughly organized and developed, the interest in the decorative side of the work grew constantly. At about twelve years this interest finally emerged from the central activity to the extent of abstract exercises in design. In these exercises the children formulated their experiences in the decoration of specific articles, and realized these experiences as illustrations of large principles of composition and design. Observation of this and other evidences of æsthetic interest led to the belief that the delight in producing arrangements of form and colors finally took the place of the earlier story-interest. The study of naturalistic symbols in the later period hinged on the desire to organize them into a whole which should be beautiful. While we instinctively responded to this need through the close observance of the children, its real significance was not fully appreciated till viewed in the light of this theory of art evolution.

How can the attention be legitimately carried through the representation of things to the representation of spaces? Mr. Fenollosa answers: Through the desire to find finer and finer space-relations. In Fig. 2 I have indicated, as far as possible, the process of drawing the iris from this point of view. First the attention is directed to the rectangle *CDHG.* What are the characteristic lines of the iris? How can the rectangle be cut by these so as to procure a beautiful division of spaces, and a unified result? *AB* and *EF* become leading lines, interpreting the plant characteristic and placed so as to divide the rectangle into three finely proportioned areas—*ABCD, ABEF,* and *EFHG.* We next consider the enrichmnet of the three areas. The eye is carried over the smallest space *ABCD,* which is related to the others by the one small leaf-shaped *N.* The central space *ABEF* is enriched by two leaf-shapes cutting it into three background spaces very harmoniously related to the leaf and petal forms. The space *EFHG* is united to the rest of the rectangle by the extension of the flower into the triangular space *OPR,* which cuts *EFHG* into three very nearly equal areas. I would call attention to the fact that in the effort to gain rhythm and balance, laws of order and beauty, the mind has been called to consider background spaces. Now, if the reader will attempt to focus his eye on spaces *ABCD, ABEF,* and *EFGH,* he will find that it is easy to retain an image of these, and by so doing he could draw the leaf *A* and stem *EF.* By noting the background spaces into which leaves *A, I,* and *L* divide the middle area, he will soon be able to image more in detail this space, and could place correctly these leaves. In the same way, by noting the relations of the three figures *ORP, FRPG,* and *POEH,* he could locate the flower. In other words, out of the art-interest has developed this power of seeing.

Children do not draw by continual reference to the subject. They draw from the image. The image is of some kind of a whole, or of a symbol which stands for the whole. The only process by which they can break up a whole into its parts, and render the parts in their correct interrelations, is by seeing the parts as lesser wholes. Hence I ask: Would the interest in objects as elements in the problem of space decoration develop a more complete power of imagery?

The work of Arthur W. Dow is familiar to everyone. He was the first to adapt art education to the theory of evolution advanced by Mr. Fenollosa. Those who see in it only an attempt to teach composition naturally wonder at its being regarded as a new point of view. If there were anything new in the laws of graphic composition, they would not be the universal laws which they are — laws as old in their manifestations as the human race. The newness lies in the attempt to develop realism out of the process of obtaining structural beauty. In the case of adults Mr. Dow has pretty clearly proved that it can be done.

Fig. 3 reproduces a set of designs made by a student in the College. These were the working out of purely æsthetic problems.

In Fig. 4 the lower left-hand drawing of landscape was the first attempt of the same student to sketch from nature.

Fig. 5 is a set of studies in composition. The original drawing from the subject is seen in the upper right-hand corner. The others are variations of the original, made for the purpose of abstracting line and dark and light as elements of space-art. These were the student's introduction to the subject of free-hand drawing. The remaining studies in Fig. 6 are the same student's first attempts at rendering nature. In all of these, the consciousness of background shapes, gained by the design and composition, aided them in seeing more readily.

I would have no one think that such abstractions as these should be presented to children. We must in no way interfere with their spontaneous impulses.

In all questions relating to organizations of art-work in elementary education, let us accept as a settled fact that no motive artificially imposed upon the child will result in real art expression. We may conclude that the child is stimulated to such expression by practically as strong elemental impulses as the race, viz., the story-telling, or, as Mr. Fenollosa calls it, the literary motive and the decorative.[2]

I have not intended to cast any doubt upon either of these motives as an initial stimulus. My question is wholly concerning the kind of control which it is possible to develop out of the satisfaction of these impulses. If we can assure ourselves that children naturally respond to æsthetic impulses, then we may feel safe in undertaking their development by gradually placing emphasis upon the art elements, and by so doing gain the visual power essential to continuous expression.

It has been clearly indicated that a sense of orderliness in the use of symbols constitutes the art side of the work. Do children show this? Here is a wide field for careful experimentation.

Fig. 6 represents a set of portfolios which children five and a half years old made to hold a set of nature records. To furnish some unifying element for the design, the children were limited to units symbolizing nature. Leaves were given them to arrange in any way they liked. They combined these leaves or used them singly. A pattern which they drew and cut from the natural leaves enabled them more freely to express their natural sense of order or disorder, as the case might be. Through difficulty in controlling their medium, the units in process of repetition lost their original form. No. 1 it will be seen, is a balanced composition. No. 2 was intersting in its development. The circle of leaves was the child's first idea. He colored these green. Not quite satisfied, he put a spot of red in the middle, and then seemed to feel the need of balancing that, and added the large circle of red paint around the outside of the leaves. In No. 3 the boy has put his name. He started it too far over, and rather than

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[2] See the discussion of this in "Principles of Education as Applied to Art," *Elementary School Record,* February, 1900; "Elementary Art Teaching in the Laboratory School," *Elementary School Teacher,* June and September, 1903; and "Æsthetic Development the Problem of the Future," *ibid.,* March, 1904.

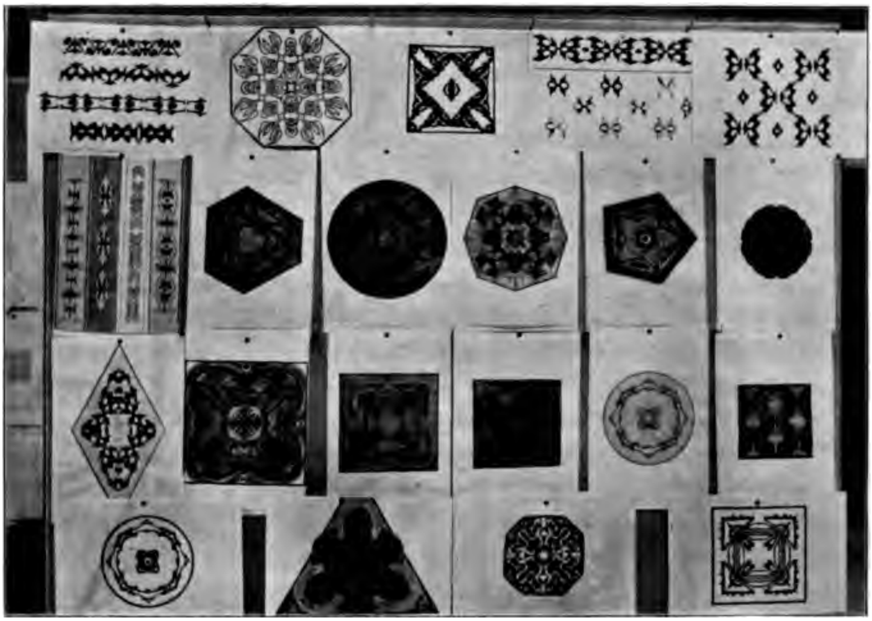

FIG. 3

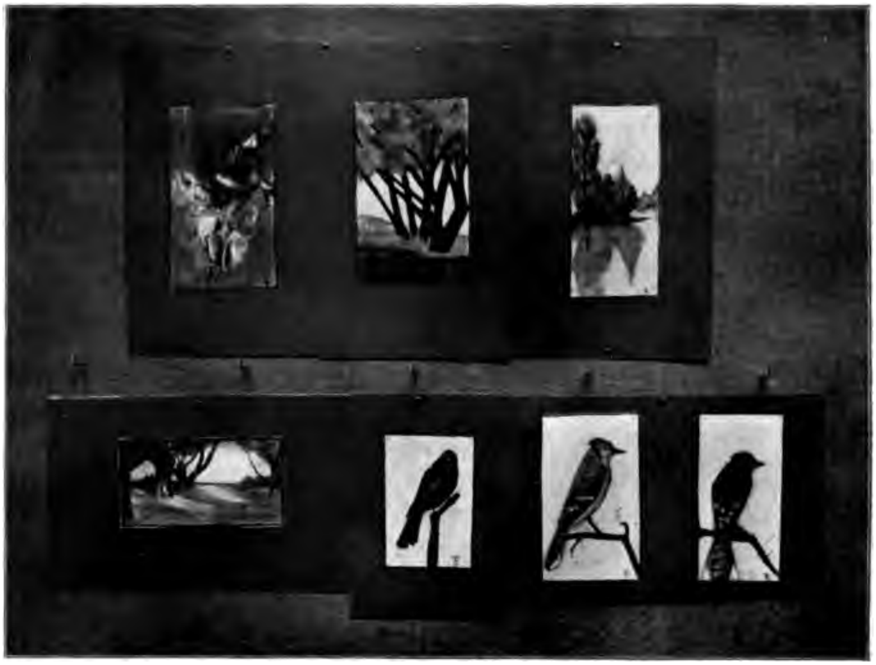

FIG. 4

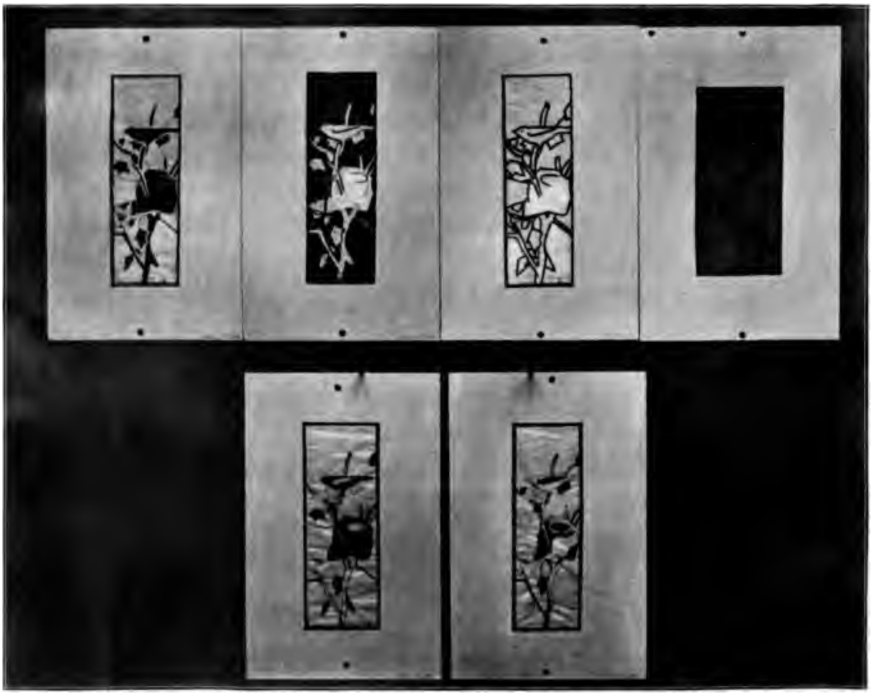

FIG. 5

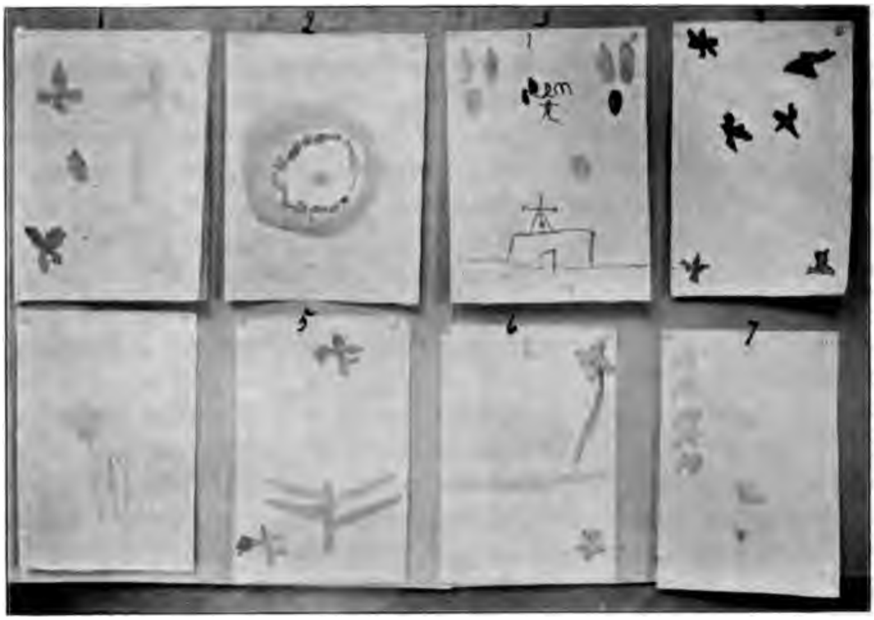

FIG. 6

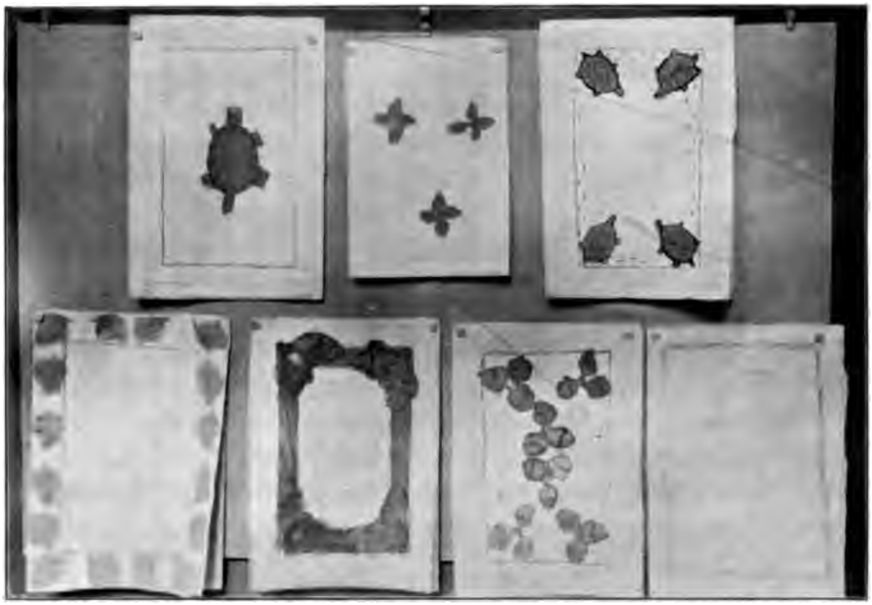

FIG. 7

make it one-sided he has placed the *T* below the letters *Den*. The lower part of the drawing he called a weather-vane. The balance of the spacing is very interesting to me. Nos. 6 and 7 are either entirely lacking in these elements, or the children failed tc carry out their original plans. No. 5 shows the flightiness of a young child's purposes. The tree on this cover was the reaction from the brush and a cake of bright color. He did not carry one set of interests through the half-hour period. Fig. 7 was the work of six-year-old children developed in the same way. Acorns, leaves, and a pet turtle figure in these designs.

Of course, I would not attempt to prove anything from such a limited number of examples, but only to indicate the direction in which investigation will do valuable service.

We would do a great injustice to our heritage from the workers in fields of so-called new education if we allowed ourselves to place undue emphasis upon the technical process. There is danger of our beginning to force upon children a lot of formal exercises in the name of æsthetic development. These may be just as isolated and foreign to his own real needs and experiences as were the type-blocks of twenty years ago. Let us question, therefore, the real interests out of which it may be possible legitimately to develop this control. The crafts seem to me to furnish one splendid initiative. They relate themselves normally to the child's life, and they furnish the very basis out of which, according to Mr. Fenollosa, the race has developed its art. In the development of decoration the attention is almost immediately fixed upon all of the spaces in any area to be decorated. If the problem is weaving stripes into a rug, it is not a question of stripes alone, but of the spaces into which the stripes are dividing the rug. The mind soon acquires the habit of noticing how particular things are cutting a certain space. When this habit is acquired, the individual, as we have seen, is a long way on in the development of real visual power.

A discussion of the development of adequate control through free pictorial expression opens up such large and fundamental educational questions that I prefer to reserve the subject, as a conclusion of this discussion, for another number of the magazine.

HAS THE DIVIDING LINE BETWEEN ELEMENTARY AND SECONDARY EDUCATION BEEN DRAWN AT THE PROPER POINT?

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Montana State Normal College, Dillon, Mont.

The question before us has been attracting the attention of the educational world for some time. A few years ago the leading educators and educational papers began the discussion of shortening the college curriculum. It was pointed out that we have been piling on to our educational requirements until it was beginning to take nearly half a lifetime for a professional man to begin his career. The same wave has now reached the elementary school. If we want to get our young men started in life at the proper age, we must save time all along the line, and the elementary school must come in for its share of curtailment as well as the college. Accordingly, we have had proposals of doing the work now alloted to the eight years of our elementary school in seven years and even six years. Superintendent Greenwood, of Kansas City, declares that we can do in seven years all we are now doing in eight, and actually do it better, for they have been doing it at Kansas City ever since 1867. If now we should make some apparently needful omissions, suggested by Soldan, McMurry, and others, we ought to be able to save at least one year more and complete the elementary work in six years.

But to the recommendations of Mr. Greenwood, Superintendent Sabin and the superintendents of some of our New England cities object most decidedly. These men maintain that the time now at our disposal is too short, if anything, and that the nine years generally devoted to the grades in Massachusetts are none too many. The whole matter is in a state of chaos, and one cannot help feeling that many now taking part in the discussion are not aware of the real point at issue. The source of disturbance lies deeper than the shortening of the curriculum. The latter is but the secondary aspect of a more fundamental problem. The matter that is at the basis of all the trouble is the lack of proper articulation in our entire school system. Educationally we have reached a stage where radical readjustment has become necessary. Our grades and our high schools and our colleges have no distinct provinces of their own. The grades from below, and the colleges from above, protrude into the secondary field, and all three aspire to be finishing schools, to which facts, more than to any other, our loss of time is due. The cause of these defects is not far to seek, but for want of space we can only hint at them here. They have come about from the historical fact that the three fundamental parts of our educational system have had independent and unrelated beginnings. Briefly stated, the New England grammar school, which has given rise to our elementary school on one side and to our high school on the other, was a college preparatory school and prepared for such schools as Harvard and Yale. But as all people did not wish to send their children to college, the high school was created as a sort of a people's college. This high school, however, was soon made subservient to the college, and it, rather than the grammar school, came to be looked upon as the preparatory school. The whole system, however, is devoid of plan, and it is this lack that is causing our present disturbance. The fields of our primary school, secondary school, and college are all three improperly defined. Readjustment is now pressing itself upon our attention, but in this we are progressing slowly, due to the momentum of existing conditions and human conservatism. Men always feel that what has been tried and has been giving us passable results, is preferable to the untried, no matter how much better the latter may appear upon the surface.

The readjustment toward which we are tending seems to be unmistakably the following: The dividing line between elementary and secondary education will be placed at the end of what now corresponds to our sixth grade; the secondary school will embrace the time between the ages of twelve and eighteen or nineteen; the old-time college will disappear from the scene; and our educational system will be culminated by a university with specific ideals. How near we already are to this arrangement will be pointed out later.

The reasons for this trend of reorganization are twofold. The first of these we may call the sociological; and the second, for the want of a better name, the genetic.

Viewed from the social standpoint, education is a process of adjustment. Man is a human being, not because of his physical equipment, nor because of his mental endowment, but because of his social environment and inheritance. Since man has reached the human stage in the process of evolution, he has created for himself a mental-historical environment which more than anything else distinguishes him from the brutes. To put man in the possession of this environment is the function of the so-called liberal education. Every generation is the trustee of the civilization of the succeeding generation, and the content of this civilization consists in the mental and spiritual conquests of the race.

The parts of man's mental-historical environment, which it is the function of education to impart, have been variously classified. W. T. Harris speaks of the five windows of the soul from which education should draw the curtain. These windows, as he gives them in *The Psychologic Foundations of Education,* are: "(1) mathematics, time, space, and mechanical relations; (2) organic nature, geography; (3) literature and art, human nature as feelings, convictions, aspirations; (4) grammar, logic, philosophy, the intellectual structure: (5) history, the doings of the greater social self as reaction."[1]

A better classification is that given by Nicholas Murray Butler in his classic essay, *The Meaning of Education.* He too makes the classification fivefold, and it is as follows: "The child is entitled (1) to his scientific inheritance, (2) to his literary inheritance, (3) to his æsthetic inheritance, (4) to his institutional inheritance, and (5) to his religious inheritance."[2] To be educated consists in being adjusted to the social possessions indicated by these five heads. No one, indeed, can be said to be truly human who is not in sympathy with, and who has not at least an outline knowledge of, the lines of achievement just mentioned.

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[1] Table of Contents, p. xxxi.

[2] P. 17.

They form the environment which alone is entitled to the term "human," and Nature herself has evolved the prolonged period of immaturity, so peculiar to man, that he may be adapted to, and be put in possession of, this environment. It is this fact that will never allow the true teacher, wherever found, to have his horizon filled with that which is merely utilitarian. The full stature of humanity, without in the least disparaging the narrowly useful, includes much that does not contribute directly to physical needs.

Having now before us this slight indication of the end that education in the broader sense should accomplish, we are ready to see what the main features of an educational system should be to reach this end. We may designate this field the field of general adjustment to environment. The time required may well be from six to eight years, and it logically falls to the secondary school. It is in this school that the so-called liberal and academic studies should be pursued. The field it embraces is organically one, but we do not now have any one school which covers it. In Germany and France the schools known as the *Gymnasium* and *lycée* in a measure fill this span, but with us it is broken up into fragments, entailing perhaps the loss of two years of time, and, what is worse, an effect upon the learner that lacks the most essential quality of unity. It wastes mind, as President Butler says.

A part of the work belonging to this field is now being done in the upper grades, another part in the high school, and still another in the first years of college. The natural lines of cleavage, however, from whatsoever standpoint we may view it, do not fall where we now have them. Considering both subject-matter and method, they fall at the end of the sixth grade of the elementary school, and at the end of the sophomore year in college. The span included between these points is the period that puts man in possession of the general social possessions of the race, and should be covered by our secondary school.

But what, then, is the distinctive function of the elementary school? It is this: The aim of the elementary school should be to put the learner in possession of the working tools of knowledge, the tools by means of which he may delve out and possess the treasures of the succeeding stage. Before a person can gain possession of the field of culture, he must know how to read and to write, to spell and to figure; he must know some of the elementary facts of composition, and some facts of grammar; he must have a general knowledge of the facts of geography and history, and of many of the facts of science now embraced in nature-study; he must have pursued an inductive, grammarless study of a foreign language; and last, but not least, he must have had courses in singing, drawing, and industrial work or manual training. All these are tools which he must continually use in gaining later a unified conception of human experience; and they should be imparted in the elementary school.

The distinctive methods to be used in the elementary school, as well as in the succeeding stage, are indicated by the stages of the child's development. We have in the past been in the habit of looking upon the child as differing from the adult only in being smaller. Growth was regarded as a matter of avoirdupois increment. But this is far from the truth. Mental growth consists primarily in the increase and addition of function. The child of ten is to a large extent a different being from the youth of fifteen. Before the period of adolescence, the characteristic adult emotions and intellectual processes are present only in embryo. Between the ages of six and twelve, roughly speaking, the child may be designated as being in the deeper sense unsocial, unmoral, and unreligious. On his intellectual side he possesses little power of consecutive reasoning, is objective and factual in his thoughts, and craves variety. It is the time for drill, habituation, and mechanism. The period corresponds on the genetic side exactly to the requirements of the sociological needs. It is the time, again, for putting the learner in possession of the tools of knowledge.

But, beginning at about the age of twelve, a great mental transformation sets in. The more profound social, moral, and religious emotions begin to function, which in a short time, but usually with much mental and physical disturbance, transform the child into the adult. On the intellectual side, the most noteworthy change is the quickening of the reasoning power. The capacity for consecutive thought is now entered upon. Real causes and effects are looked for as never before, and the childish "why," which almost any explanation would satisfy, ceases to exist. In short, adolescence inaugurates the time for the organization of experience on a logical and scientific basis. On the emotional side, it begins the time for literary and æsthetic appreciation.

The point of especial interest to us again is the fact that this period corresponds psychologically to the period of general adjustment. The youth begins to feel himself a member of the race, and is inherently fitted to assimilate the factors which comprise humanity's peculiar environment.

Both lines of investigation point to the conclusion that the dividing line between elementary and secondary education should be drawn about two years earlier than is actually the case. The stages of an educational system so divided would have definite functions to perform, and would thereby be supplied with the greatest motive for efficiency — a definite goal to be achieved. The benefits would accrue to both the grades and the high school, but especially to the latter. This institution has now neither a logical beginning nor a logical ending. It embraces an amorphous section of our educational system, and is thus left without the stimulus of an exclusive ideal. Efficient though our high schools are, their best friends are fully aware that they ought to be far more efficient. But the marvel is not that they do not yield the results we should like to expect, but that they yield as much as they do. The institution is minus both head and feet, these necessary parts being embraced by the first years of college and the upper grades. Without them, figuratively speaking, it can neither conceive of a specific, unified ideal, nor make progress in its efforts toward such an ideal.

A discussion of the nature of the coming college or university — meaning by the term "university" a collection of colleges — is not pertinent to the topic in hand, but for the sake of logical completeness we must give it passing notice. For those who can read the signs of the times, the nature and function of this institution have in the last few years become distinctively evident. The university is fast becoming the training school for the professions and vocations of life. This it is doing, of course, on broad scientific and technical lines. The reason that this fact is not evident to many is because the fields of the scholar and scientist are not included in their minds among the vocations of life. But the training for research, in whatever line it may be, is as much a training for life as the training for medicine, engineering, or law.

The number of years to be devoted to the college or university is quite undetermined. It may be from four to six, and time may show that it is best to divide these years into two groups. These groups would be distinguished by the character of the work done. In the first group this might be called professional preparatory study, and in the second, professional study.

The proximation we have already attained to an educational system, as above outlined, is probably closer than many of us realize. There is now an obvious line of cleavage between the sophomore and junior years of our leading colleges and universities. The methods of instruction are distinctly different above and below this line, and after the sophomore year electives are permitted which count toward the professional, as well as toward the academic, degrees.

In some places, moreover, the line of cleavage at this point has come to an actual split. The first two years of college, which are distinctly of the secondary-school type, are being included in the high schools. Where this is done, I understand, the plan is growing in favor.[8]

The line of demarkation between the intermediate and grammar grades is also quite distinct. The difference is again one that embraces both the method of instruction and the subject-matter. The method dominated by repetition, drill, mechanization, and concrete imagery in the former gives way to the tracing of causal relations and the application of principles in the latter. The intermediate teacher uses interesting material to implant concepts and establish habits of action, while the grammar-grade teacher places the emphasis upon the interpretation of interesting material by means of concepts and principles. This is exactly the point of view of the secondary school. The subjects studied in the upper grades are approached from the adult point of view. Arithmetic, grammar, history, and geography are here thoroughly organized, just as these and other subjects are in the high school. Furthermore, the field of electives is in many places extended to the upper grades, as is also departmental teaching, which is but a phase of specialization on the part of the teaching force, characteristic of secondary and higher education.

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[8] See *Elementary School Teacher*, December, 1904, p. 251.

As yet only a few cities have gone to the extent of incorporating the upper grades into the high school, but where it has been done it is meeting with eminent satisfaction. At Three Rivers, Mich., where this plan has been in force for two years, Superintendent McElroy, as well as the patrons, are growing more and more enthusiastic in its favor. In a personal letter, the specific points of advantage mentioned by Mr. McElroy are the following:

> 1. It places pupils on their own responsibility earlier, and makes them independent of the teacher at an earlier age as a result.
>
> 2. It gives the pupils the advantage of training by teachers especially prepared for the work being done.
>
> 3. It keeps the pressure at a high degree all the time. This may be an objection, but I have found that it has done no damage, because teachers have been reasonable in their demands.

The following extracts come from a personal letter written by Professor A. S. Whitney, now of the University of Michigan. Professor Whitney was for some years superintendent of the school at Saginaw, Mich. He says:

> While superintendent of schools at Saginaw, seven years ago, I incorporated the seventh and eighth grades into the high school. . . . . I think it is not too much to say that the results have more than fulfilled our expectations. Those so desiring can take the old-line studies together with the new, while those intending to enter college from the beginning can accomplish enough to place them practically in the sophomore year in our best universities. In other words, they save just one year.
>
> So much for the practical side. As for the theoretical side, the argument, to my mind, is entirely on the side of the six-year elementary and six-year high school. . . . . Our eight-year and four-year segregation is purely American, a result of sociological forces which have long since passed away. Psychologically it has never been defensible, as I view it.
>
> The destruction of this old eight- and four-year fetich, and the substitution of the six-year elementary and six-year high school in its place, with

the proper connections, is, in my opinion, the most important educational reform now before us.

It seems conclusive that wherever this readjustment of the curriculum on the rational basis has been tested, the results have sustained the most sanguine expectations. This is especially true when we remember that the readjusting process has as yet been carried out only in part at any one place. And what has been done in the places referred to is little more than transference of work from one school to another. The internal reorganization of the work, which is the corner-stone of the new order of things, has scarcely begun. To meet the ends for which each stage of our school system should stand, much redistribution and rearrangement of work are obviously necessary. There is now a great deal of needless repetition, and some studies are pursued before the students are ready for them. This results primarily from the fact that each school now in a sense tries to be a finishing school. There must be rounded courses of history, literature, geography, arithmetic, grammar, and physiology in the last two years of the grades, because many pupils are supposed to graduate from the eighth grade into the immediate vocations of life. The same also holds for the high school, but in a greater degree. The student who goes to college is rather the exception than the rule. The high school must therefore be a finishing school. But the field that naturally falls to the high school cannot be adequately covered in four years. Hence conditions of hurry and superficiality result here.

The gain resulting from the new order of arrangement would be chiefly in the quality of the work done. But there is also reason to hope that about two years of time would be saved. The eight years now devoted to secondary training in three different schools could probably be reduced to six. This time would be saved, not by omissions, but by the elimination of needless repetitions and a more efficient arrangement of studies.

Another gain to society would accrue from the larger number of students that would avail themselves of the opportunities of the school. Each school being now a finishing school, the encouragements for dropping out are too great. Under a properly articulated school system there would be reasons for continuing that are now largely obscured. Statistics also, so far as our present limited opportunities furnish them, seem to bear us out here. Wherever shortened courses for the grades have been tried, the high-school attendance seems to have been thereby materially increased. Superintendent Greenwood is fully convinced on this point.[4] He attributes the phenomenal high-school enrolment of Kansas City in large part to the seven-year course in the grades. The effect of this factor on the Kansas City schools has, indeed, been denied by Mr. Sabin,[5] but it is not at all clear that his denial is sustained by the facts.

Another distinct gain would come from the matter of discipline, particularly in so far as the playground is concerned. Seventh- and eighth-grade pupils must be dealt with differently from intermediate and primary children, but when they are all together this becomes a difficult problem. For want of sufficient room in the public school at Dillon, we were obliged last year to remove the eighth grade to the normal building. The salutary effect of this separation, both on the grades left behind and on the eighth grade, was scarcely short of remarkable. The spirit of our entire school was changed for the better.

Now as for objections to the new arrangement. If we grant the points of advantage just mentioned, it becomes difficult, indeed, to find any. It is maintained that the administration of the proposed régime would be more expensive than the present, because high-school instruction is more expensive than grade instruction. For the sake of argument, let us grant this point. We must bear in mind, however, that we should count the total cost, and not only the cost at any one particular point. Now, when we remember that the secondary period would be reduced by about two years, it would rather appear that the total cost may even be lessened. But in a matter like this we should not expect increased efficiency for nothing.

In conclusion, it may be said that the American nation is ready to take a long stride ahead in educational organization and reform.

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[4] See National Educational Association *Report*, 1903, pp. 247 ff.

[5] See *Education*, October, 1903, pp. 108 ff.

We owe it to the cause of civilization. Other nations look to us for ideals in governmental administration and commercial and industrial enterprises, but they can find little to copy from our inarticulated school system. Being less hampered by ancient traditions than European nations, this is not as it should be. America may justly be expected to take the lead in educational matters.

In the coming American school system there will, indeed, be distinction, but there will be no organic separation. The whole system will be in the form of a regular and continuous curve, having one part vitally connected with another. It will begin in a concrete and fundamental way in the elementary school, pass up into the realm of culture in the secondary school, and down again in the university to the specific vocations of life. It will provide in the most efficient manner for the two fundamental requirements of life. The individual who will have availed himself of its opportunities will be in position both to make a living and to find life worth living.

ROBERT, CAVALIER DE LA SALLE, ET JOLIET AU CHATEAU ST. LOUIS[1]

LORLEY ADA ASHLEMAN
School of Education

These two plays furnish reading-lessons for the sixth and seventh grades, now studying French colonization in America. The children of both grades will represent *Robert, Cavalier de La Salle* to the French classes of the School of Education, and the seventh grade will represent *Joliet au Château St. Louis.*

The plays present bits of history that are as much American as French. Faint and far away as that Jesuit activity in missions and in discovery may seem to us, the life then set in motion still lives in us: lives in our names, from the Sault Ste. Marie at the head of Lake Superior to the city on the mouth of the great central watercourse at the Gulf; lives in our stories of the brave lives of Christian teachers like Father Marquette; and lives, too, in the quaint traditions and customs that may occasionally astonish a modern American traveler if he should be detained in some of the quieter old-fashioned villages along the Illinois River. We do not realize how distinctively French were the beginnings of civilized American life in large portions of Wisconsin and Illinois and farther south.

We are too likely to think of everything as British. But France in the time of Louis XIV was a much richer and stronger country than England. Her influence and her interests extended over the civilized world. No reason was seen then why she should not prove the great colonizing nation of Europe. She had an East India Company; she owned Canada, Louisiana, and what was known of the more northern Mississippi Valley. Who could imagine that in less than a century all this would be swept away, and that England would be the dominating force in North America? Or which of those Jesuit teachers, living as they did with savages, in miserable poverty and often in dire distress and danger of their lives—which of them would have imagined, as he traced in fancy the life at Versailles of the most splendid court in Europe, enriched with every luxury money and ambition could devise, that this undeveloped, uninhabited land should ere long far surpass France itself in wealth and luxurious invention? How much less could he have imagined that an American gentleman should one day own the right of hunting in those splendid parks of Versailles, then the care and the special pride of French kings.[2]

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[1] *Joliet au Château St. Louis* will appear in the May number.

ROBERT, CAVALIER DE LA SALLE

(Saynète)

CHAPITRE III

PERSONNAGES

- **Louis XIV**, roi de France.
- **Colbert**, secrétaire d'état aux finances.
- **La Salle**, explorateur français.
- **Tonti**, explorateur italien, compagnon de La Salle.
- **Pages**.
- **Omohahoha**, chef des Illinois.
- **Le père Hennepin**, missionaire et explorateur français.
- **D'Autray**, compagnon dévoué de Tonti et de La Salle.
- **Un guide mohican**.
- **Coureurs de bois**.
- **Indiens**.

SCÈNE I

(La scène se passe à Versailles en 1675.)

Personnages: Louis XIV; Colbert; La Salle; un page.

Colbert: Je supplie *Votre Majesté* de vouloir bien lire et considérer avec attention les deux pétitions que voici. Je viens de les recevoir de Robert, Cavalier de La Salle, explorateur courageux du nouveau monde et voyageur intrépide. Il est en France depuis peu de jours.

Louis XIV: Robert, Cavalier de La Salle! Ah, Monsieur Colbert, Monsieur de Frontenac m'a souvent parlé de lui dans les

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[2] Mr. James Gordon Bennett owned this right a few years ago, if he does not still own it.

termes les plus élogieux. Il se plaisait à le comparer à Ponce de Léon et à Ferdinand de Soto.

Colbert *(s'incline profondément): Votre Majesté* n'oublie jamais ceux qui travaillent à la gloire de la France.

Louis XIV *(prenant les pétitions):* Voulez-vous d'abord me lire la lettre du Comte de Frontenac?

Colbert *(lit):* Comte de Frontenac à Colbert, le quatorzième jour du mois de Novembre, en l'an de grâce, mil six cent soixante-quatorze. "Je vous recommande Robert, Cavalier de La Salle, pour toutes les entreprises que Sa Majesté daignera lui confier, car il a une connaissance parfaite de l'état de la "Nouvelle-France," ainsi que vous pourrez en juger si vous daignez lui accorder quelques minutes d'audience."

Louis XIV *(avec un léger sourire):* Cette recommandation mérite qu'on la considére avec quelque intérêt, car elle vient du Comte de Frontenac qui ne donne pas des louanges à la légère. *(Il parcourt rapidement les pétitions.)* Bah! Une lettre d'ennoblissement! *(Fronçant le sourcil.)* Quoi, encore! Monsieur de La Salle demande le gouvernement du Fort Frontenac et du lac Ontario. *(Il réfléchit un moment.)* Enfin, je veux le voir, Colbert.

Colbert: Sire, il attend dans l'antichambre le bon plaisir de *Votre Majesté.*

Louis XIV: Qu'il entre!

Un page: M. Robert, Cavalier de La Salle!

(La Salle entre et s'agenouille devant le roi.)

Louis XIV: Levez-vous, M. Robert, Cavalier de La Salle. Nous sommes informé des bonnes actions que vous avez accomplies dans la "Nouvelle-France." Le Comte de Frontenac dit que vous avez une connaissance parfaite de l'état de ce pays. Dites-Nous un peu ce que vous comptez faire dans le nouveau monde.

La Salle: Sire, je viens de la *"Nouvelle-France"* demander à *Votre Majesté* l'autorisation d'explorer la partie occidentale de ce pays. Il y a de vastes contrées à découvrir, d'impénétrables forêts, des lacs, des rivières, des fleuves. *(Avec feu.)* Que *Votre Majesté* daigne m'accorder l'autorisation de construire partout des forts pour lui assurer cette conquête . . . . ! *(Il s'agenouille.)*

Louis XIV: Nous recevons agréablement la supplication que vous *Nous* faites pour découvrir la partie occidentale de la "Nouvelle-France," et Nous donnons d'autant plus volontiers les mains à cette proposition qu'il n'y a rien que Nous ayons plus à cœur que la découverte de ce pays, dans lequel, selon toute apparence, on pourra trouver un chemin pour pénétrer jusqu'au Mexique.

Nous avons tout lieu d'espérer que vous réussirez à Notre satisfaction et à l'avantage de nos sujets de la "Nouvelle-France." Mais Nous estimons aussi qu'il y va de Notre justice de distinguer ceux qui se sont signalés pour exciter les autres à mériter de pareilles faveurs. A ces causes et pour le bon et louable rapport qui Nous a été fait de vos bonnes actions dans le pays de la "Nouvelle-France," vous étes ennobli. *(Il effleure La Salle de la pointe de son épée.)* Levez-vous, Robert, Cavalier, Sieur de La Salle!

SCÈNE II

(La scène se passe au camp des Illinois à Péoria en 1680.)

Personnages: La Salle; Tonti; le père Hennepin; Omohahoha, chef des Indiens; un guide mohican; coureurs de bois.

Le guide *(en avant):* Ecoutez, nous sommes si près que nous pouvons entendre les sauvages.

Tonti: En effet, voilà le camp des Illinois.

La Salle *(vivement à sa petite troupe qui le suit en silence):* Français, en avant!

(Les Indiens entendent l'ordre. Ils s'avancent. L'audace des Français les effraie. Une grande confusion se fait au milieu d'eux. Les femmes et les enfants poussent des cris de terreur. Enfin trois vieillards, portant des pipes ornées de divers plumages, s'avancent à petits pas. Ils élèvent leurs calumets vers le soliel, puis s'arrêtent devant La Salle. Ils implorent la paix lui présentant en même temps les trois calumets. La Salle, qui a aussi un calumet le montre aux vieillards. Les Indiens éclatent en cris de joie. Le père Hennepin s'empare de plusieurs enfants. Il les tranquillise par de douces paroles et par des caresses.)

Le père Hennepin *(levant ses yeux vers le ciel, un enfant dans les bras):* Quels beaux sujets pour la religion!

(Le chef des Indiens s'avance et présente un calumet à La Salle. La Salle le prend, et quand il a fini de pétuner, le chef l'invite à s'asseoir.)

LE CHEF DES INDIENS: Prends place, toi et tes Français.

(Les femmes et les enfants s'éloignent à pas lents, se retournant de temps en temps pour regarder les Français.)

UN DES TROIS VIEILLARDS *(étendant les mains vers le soleil, et les tenant ainsi comme pour se garantir de ses rayons):* Que le soleil est beau, Français, quand tu nous viens visiter.

(Les trois vieillards s'asseyent ensuite sur l'herbe, et le reste de la foule suit leur exemple. Tout se fait sans bruit et avec toutes les marques du plus grand respect.)

LE CHEF DES INDIENS *(se tournant vers le maitre des cérémonies):* Le grand festin!

(On apporte un grand plat en bois plein de sagamité, farine de blé d'Inde qu'on a fait bouillir avec de l'eau et que l'on assaisonne de graisse. Trois ou quatre fois, les Indiens présentent aux Français une cuiller pleine de sagamité. Puis, on sert le second mets trois poissons. Le maitre des cérémonies en prend quelques morceaux, puis il souffle dessus, pour les refroidir après quoi, les Indiens en mettent des morceaux dans la bouche des Français. Le troisième mets est un grand chien.)

LA SALLE: Nous ne pouvons manger de ce mets. Je vous prie de le retirer de devant nous.

LE CHEF *(dont le visage exprime le plus grand étonnement).* Qu'on enlève le chien!

LA SALLE *(doucement):* Les Français ne mangent pas le chien. *(Il offre un rôle tabac au chef des Indiens.)* Je vous offre ce pétun, parce que c'est votre coutume de le prendre toutes les fois que vous traitez de quelque affaire importante afin de dissiper les mauvaises vapeurs qui pourraient troubler vos esprits.

LE CHEF DES INDIENS *(à voix basse):* Voilà qui est bien, mon frère.

LA SALLE *(offrant des colliers, des bracelets, du drap rouge, et des haches):* Je vous offre des colliers et des bracelets. Je vous présente cette étoffe rouge, parce que j'ai remarqué que, dans toutes les fêtes que vous célébrez, vous êtes accoutumés à vous peindre le visage de cette couleur. Ce cadeau marque qu'à l'avenir vous vivrez toujours dans le plaisir et dans la joie. Ces haches que je vous donne serviront à dresser un tombeau magnifique à vos parents défunts. *(Il prend des lames d'épée et les enfonce dans le sol autour des présents dont il vient de faire cadeau aux Indiens.)* Je fais une palissade de fer afin qu'à l'avenir, les corps de vos parents décédés ne reçoivent aucune injure.

(Les Indiens éclatent en cris de joie.)

LE CHEF DES INDIENS *(se levant et s'adressant à La Salle):* Ta visite a rendu le ciel plus beau, le soleil plus éclatant, et la terre plus verdoyante. Je te remercie, toi et tes Français, de la peine que vous vous êtes donnée pour venir nous rendre visite.

LA SALLE: Nous sommes venus en hommes de paix vous parler du vrai Dieu qui vous a créés tous et qui désire que vous Lui obéissiez. Nous venons vous protéger, car le Grand Roi des Français vous fait savoir qu'il veut que la paix règne partout. Les Iroquois sont les sujets du Grand Roi, pourtant s'ils vous font la guerre, le Grand Roi vous donnera aide et protection. Moi et mes Français, nous allons à la recherche de la Grande Rivière. Nous avons besoin de blé d' Inde. Voulez-vous nous en vendre? Si vous ne nous vendez pas le blé nécessaire, nous passerons chez les Osages et nous ferons tout pour eux.

LE CHEF *(avec dignité et bienveillance):* Français, je suis votre ami, c'est pourquoi je vous prie de rester parmi nous et de ne pas chercher la Grande Rivière. On y trouve des serpents et des monstres, elle vous mènera à la mort.

LA SALLE *(fièrement):* Un Français est invincible dans tous les événements contraires, et il espère toujours avec le secours du ciel venir à bout de tous les obstacles.

TOUTE LA TROUPE: Vive le roi! Vive le roi!

LE PÈRE HENNEPIN *(levant ses mains jointes vers le ciel):* Deo Gratias!

(Les Indiens poussent des cris divers.)

SCÈNE III

Personnages: La Salle; D'Autray; Tonti; une poignée d'hommes; des Indiens.

(La scène se passe au golfe de Mexique en 1682.)

(La Salle, ému, indique le golfe.)

TONTI: Le golfe! le golfe!

D'AUTRAY *(solennellement):* Rendons grâces à Dieu! nous y sommes.

LA SALLE *(à ses hommes):* Qu'on apporte la colonne!

(Les Indiens s'approchent sérieux, silencieux. On apporte la colonne qui porte cette inscription: LOUIS LE GRAND, ROI DE FRANCE ET DE NAVARRE, RÈGNE LE NEUVIÈME AVRIL, 1682.)

LA SALLE *(plantant la colonne dans le sol):* Au nom du prince le plus grand et le plus victorieux, Louis le Grand, par la grâce de Dieu, roi de France et de Navarre, quatorzième de ce nom, ce neuvième jour d'Avril, 1682, je prends possession de ce pays de Louisianne.

(On y attache les armes du roi.)

TOUT LE MONDE: Vive le roi! Vive le roi!

(La Salle prend une croix et la dresse à côté de la colonne. Tout le monde chante le "Te Deum.")

CHAPITRE III

The grammar lessons are a résumé of the grammar work brought out in each scene of the play. A breath of life enters the dry bones of grammatical construction, when the lessons are the outcome of a real need. Experience has shown that in this relation the historical and grammatical quiz is a satisfaction to student and instructor alike.

LECONS DE GRAMMAIRE

PREMIÈRE LEÇON

Remarques sur l'orthographie de certains verbes irréguliers de la première conjugaison. Cette conjugaison compte quatre mille verbes irréguliers.

1. Verbes en *-cer*. Les verbes en *-cer,* comme *avancer, prononcer,* prennent une cédille sous le *c* devant les voyelles *a* et *o,*

pour conserver au *c* la prononciation douce de l'infinitif: Ex.: "La Salle s'avan*ç*a respectueusement et s'agenouilla devant le roi."

2. Verbes en *-ger*. Les verbes terminés à l'infinitif par *-ger,* comme *charger,* prennent un *é* muet après le *g* devant les voyelles *a* et *o,* pour conserver au *g* la prononciation douce de l'infinitif: Ex.: "Colbert se charg*e*a de la pétition de La Salle."

3. Verbes en *-eler* et en *-eter*. Les verbes terminés à l'infinitif par *-eler* et *-eter,* doublent la consonne *l* ou *t* devant une syllabe muette. Ex.: "Louis XIV s'appe*ll*e du nom de grand roi."

Exceptions: *acheter, geler, épousseter, celer, modeler, peler, racheter,* au lieu de doubler la consonne *l* ou *t,* prennent un *è* ouvert devant une syllabe muette. Ex.: "La Salle ach*è*tera chèrement la gloire qui devait couronner sa mémoire."

4. Verbes en *-yer*. Les verbes en *-yer* changent l'*y* en *i* devant un *é* muet: Ex.: "Le guide que La Salle envo*i*e en avant découvre le camp des Illinois."

Exception: Les verbes en *-ayer* conservent généralement l'*y* devant un *é* muet. Ex.: "La Salle pa*y*era (ou pa*i*era) cher ses courses aventureuses."

5. Verbes en *-ier*. Les verbes en *-ier,* comme *lier, prier,* s'écrivent avec deux *i* de suite aux deux premières personnes du pluriel de l'imparfait de l'indicatif et du présent du subjonctif. Ex.: "Que ne vous l*ii*ez-vous aux intérêts de ces pauvres sauvages, dit le père Hennepin."

6. Verbes qui ont un *é* muet à la dernière syllabe. Ces verbes changent *é* muet en *é* ouvert (*è*) devant une syllabe muette: Ex.: "Pourquoi les Indiens enl*è*vent-ils le chien?"

7. Verbes qui ont un *é* fermé (*é*) à l'avant-dernière syllabe de l'infinitif. Ces verbes remplacent l'*é* fermé par l'*è* ouvert devant une syllabe muette, excepté au futur et au conditionnel: Ex.: "Quel territoire poss*è*dent les Indiens aujourd'hui?"

DEUXIÈME LEÇON

Verbes passifs

Le verbe passif est celui qui exprime une action reçue ou soufferte par le sujet. Ex.: "La Salle *fut salué* par les Illinois."

On reconnait qu'un verbe est passif quand on peut ajouter après lui les mots *par quelqu'un, par quelque chose.* Ainsi *être saluè* est un verbe passif, car on peut dire *être saluè par quelqu'un.*

On tourne une proposition active en proposition passive en faisant du complément direct de la proposition active le sujet du verbe passif, et en employant le sujet de la dite préposition, comme complément indirect de la proposition passive. Ex.: Proposition active: "Les Indiens saluèrent La Salle." Proposition passive: "La Salle fut salué par les Indiens." [3]

TROISIÈME LEÇON

Verbes réflèchis

Le verbe réflèchi est celui dont le sujet et le pronom complément désignent la même personne. Ex.: *"Je m'efforcerai* de servir les intérêts de Votre Majesté." Ces verbes s'appellent aussi pronominaux.

Les verbes réfléchis sont divisés en deux classes: En verbes *essentiellement réflèchis,* nom donné à ceux qui ne peuvent *jamais* s'employer sous une autre forme: Par exemple, *s'efforcer* est de ce nombre. Il faut dire *absolument:* "Je *m'efforcerai* de servir les intérêts du roi," et en verbes *accidentellement réflèchis,* car si l'on peut dire: "Louis XIV *se promenait* avec la reine dans les jardins de Versailles," on peut également dire: "Louis XIV *promenait* la reine dans les jardins de Versailles." *Se promener* est donc *accidentellement* réfléchi.

Dans les temps composés des verbes sus-nommés, on emploie l'auxiliaire *être,* mais il joue le rôle de l'auxiliaire *avoir.* Ex.: "Monsieur de La Salle s'est récréé avec les Illinois," équivaut à: "Monsieur de La Salle a récréé lui-même avec les Illinois." [4]

QUATRIÈME LEÇON

Des verbes unipersonnels ou impersonnels

On appelle verbes unipersonnels les verbes qui ne se conjuguent qu'à la troisième personne du singulier de chaque temps. Ex.: "Il pleut," "Il neige," "Il grêle."

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[4] Then follows the conjugation of the reflexive verb *s'efforcer.*

[3] Then follows the conjugation of the passive verb *être salué.*

Le pronom *il*, qui accompagne un verbe unipersonnel, est une espèce de pronom indéfini, qui ne tient la place ni d'un nom de personne, ni d'un nom de chose. On l'appelle "sujet apparent" du verbe. Ex.: Dans "Il convient," le pronom *il* est sujet apparent de *convient*.

On appelle "sujet réel" du verbe unipersonnel tout le reste de la proposition. Ex.: "Il convient de récompenser ceux qui se sont le plus distingués." "Ceux qui se sont le plus distingués" est le sujet réel du verbe *il convient*.

Conjugaison d'un verbe unipersonnel

Indicatif présent	Il pleut
Imparfait	Il pleuvait
Passé défini	Il plut
Passé indéfini	Il a plu
Plus-que-parfait	Il avait plu
Passé antérieur	Il eut plu
Futur	Il pleuvra
Futur antérieur	Il aura plu
Conditionnel	Il pleuvrait
Passé du conditionnel	Il aurait plu

SIXIÈME LEÇON

Questionnaire

1. Quel est le plus célèbre des ministres de Louis XIV?
2. Quelles pétitions Colbert se *chargea*-t-il de présenter au roi?
3. Pourquoi Louis XIV *jugea*-t-il la pétition digne d'être présentée au roi?
4. Quelles paroles *prononça*-t-il en ennoblissant La Salle?
5. Quel ordre effraya les Illinois?
6. Comment s'*appelle* le chef de ces sauvages?
7. De La Salle *cèle*-t-il aux Illinois le but de son voyage?
8. L'Illinois est-il un climat chaud ou froid?
9. Y gele-t-il quelquefois?
10. Les Indiens *rejettent*-ils les cadeaux de La Salle?
11. Les Français qu'*achètent*-ils aux Illinois?
12. Payent-ils le blé cher?

13. Nous soucions-nous de la colonisation autant que nous nous en soucions jadis?

14. A quelle religion le Père Hennepin liera-t-il les Indiens?

15. Pourquoi les Indiens enlevèrent-ils le chien de devant les Français?

16. Les Indiens *pelent*-ils les fruits avant de les manger?

17. Que devait découvrir le guide que La Salle *envoie* au devant de lui?

18. Pourquoi y *allait*-il de la justice de Louis XIV de distinguer ceux qui se sont le plus signalés?

19. Pourquoi tous les sujets de Louis XIV *s'efforçaient*-ils de lui plaire?

20. *Par qui* la Nouvelle France fut-elle d'abord *explorée?*

21. Pourquoi *nous plaisons-nous* à relire les aventures du Cavalier de La Salle?

22. A-t-on *modelé* des statues à La Salle et à ses compagnons?

23. En *modèlera*-t-on encore d'autres?

24. Vous *intéressez-vous* à ce récit?

25. Y a-t-il lieu d'être reconnaissant à La Salle pour ses découvertes?

COOKING IN THE THIRD GRADE

JENNY H. SNOW
University Elementary School

The third grade is studying vegetables, classifying them according to their composition into starchy, sweet-juiced, and strong-juiced vegetables. They are studying the ways of cooking each class and the making of vegetable soups.

The need was felt for some literature on the subject which would help the children to realize what the cultivation of some of these vegetables has meant to the world. No such literature could be found, so, from a number of reading-lessons specially prepared by members of one of the college classes in education, the following was compiled.

THE IRISH POTATO

The first home of the potato was in South America. There it was found wild. Sometimes we call it the white potato, that we may know it from the sweet potato. Often it is called the Irish potato. Do you know why? It is because the people of Ireland use so many, many potatoes. It was carried to Ireland from our own country over three hundred years ago. It is now the principal food among the peasants.

We have all seen the potato plant in bloom. Its pretty blossoms are sometimes bluish white and sometimes purple. I wonder if anyone has noticed its green berry or seed-ball. Potatoes are not usually raised from these seeds. A part of the potato itself is planted, and from each eye a new plant grows.

A schoolboy named Luther Burbank, while walking through a field of early rose potatoes, saw a seed-pod on one of the plants. He watched it carefully, thinking he would save the seeds and plant them. The field was near where he went to school, so he watched the pod from day to day. One morning when he looked for it, he found it had disappeared. He got down on his knees and hunted the field over. He cried over his loss and went every day for a week to the field looking for this seed-pod. He finally found it about sixteen feet away hidden under another vine. It had evidently been knocked off by someone passing rapidly. He kept the seed-pod and the next year planted the seed. From the plants which grew he secured the one which produced the Burbank potato. Burbank potatoes are known all over the world.

The potato is a queer vegetable. It grows under the ground, but it is not a root. It is an underground stem.

We found that potatoes contain a great deal of starch. Much of the starch we use comes from potatoes. This useful, homely, everyday vegetable is found in almost every country. It has been used in France for a long time.

"Three cheers for the French Republic,
And the good potatoes eaten in it!"

Shall I tell you what happened to the first potatoes eaten in France? Well, a long, long time ago, when the Indians roamed all over this country, the Spaniards came to South America. There they noticed that the people ate, and almost lived upon, what they thought was the large root of a vegetable called *battata.* *Battata* means "papa."

The Spaniards sent some of these *battata* to their friends in Spain, and these friends sent them to Italy, another country near France. Finally some were sent to Belgium, to the mayor of Mons, which is almost in France.

The mayor liked the king of France very much and wanted to send him a rare gift. What did he do but send him a whole sack of potatoes!

Henry II, king of France, invited the great lords and noblemen of his court to a feast. The potato was to be the important dish. When the potatoes appeared the guests became very much excited. The king was the first to be served. He tasted the potatoes once, twice, and then passed the dish on in perfect silence. The lords and noblemen did as he had done. What was the cause of all this silence? The cook had not boiled them before serving them with a delicious mayonnaise dressing. After the feast the king had every potato thrown out of the city of Paris.

About two weeks later some soldiers were camping near the fortifications of the city. While sitting around their camp-fire it seemed to them as if a most appetizing odor came from the glowing ashes of the fire. They began to examine the ashes in order that they might find the cause of the tempting smell. What a feast they had when at the end of a stick appeared one of the potatoes sent to the king of France. The soldiers ate them without the least fear, and they ate every one of them.

The news of this lucky find reached the ears of the king. I wonder if his poor cook lost his position. However that may be, the king sent for more potatoes and gave another feast. The potato was served again, but cooked this time. The most particular guest could not find one word to say against it.

There are many stories told of what the potato has done for our own country.

Over a hundred years ago our country was fighting against England. The American people wanted a government of their own, so that they could rule themselves. This war was the Revolutionary War.

General Francis Marion was one of the bravest fighters on the American side. He and his soldiers lived in the thick forests of South Carolina.

One day the English general sent a young soldier into the woods to find General Marion and his army. Just at dark, when he thought that he was lost, the young soldier saw the camp-fires of the Americans gleaming through the trees. Riding up close to the fire where the soldiers could see him, he waved his white handkerchief. Seeing the white handkerchief, the soldiers knew that he was a messenger and did not shoot him. They directed him to the tent of General Marion. Here the Englishman found him seated on a log in a tent made of pine boughs. Leaping down from his horse, he said: "General Marion, I have a message for you from my general." Marion said: "I will hear your message after we have eaten."

Presently, several of the officers came into the tent and sat down on the logs. The Englishman looked all around for the table, but could find no sign of it. Soon a soldier came into the tent and said: "General Marion, supper is ready." He passed the plates. What do you think the plates were that the soldier brought into the camp? They were huge chips cut from a large tree near the camp-fire. The English soldier thought: "These are very funny plates. I wonder what the food will be!" Another soldier came in with some smoking-hot potatoes, just taken from the ashes of the camp-fire. The potatoes were placed upon the chips and handed to the officers. The poor Englishman had been riding all day and was very hungry. How he did enjoy those baked potatoes! Again and again the soldier brought into the tent the hot potatoes, and the Englishman thought that he had never eaten half so nice a meal.

When supper was over, the plates were placed in the fire instead of in a dish-pan. While they sat watching the plates burn in the glowing fire, General Marion said to the Englishman: "You now see what we Americans have to eat here in the woods. But just as long as we have potatoes, so long will we continue to fight for our country." The Englishman then knew that money could not buy General Marion and his brave soldiers. He was ashamed to tell General Marion that he had come out into the woods to get him to desert his country. He said: "General Marion, you are a brave man, and we can never conquer you as long as you and your soldiers have the potato as your friend. I shall return in the morning and tell my general that the potato is stronger than his gold."

In the morning the English soldier again ate baked potatoes, without salt or butter, on a wooden plate. He went back to his own country and never fought against America again.

General Marion, however, by the aid of the potato, continued to live in the dark, swampy forests of South Carolina. He fought so bravely that at last all the English were driven from the country.

THE MARCH MEETING OF THE PARENTS' ASSOCIATION

MRS. FRANK HUGH MONTGOMERY
Secretary Parents' Association

The Parents' Association of the University Elementary and High Schools met in the school building on March 16, the president in the chair.

Mr. Kroh, of the department of physical training, read a paper asking that physical culture be considered an art, and that it stand for the all-around development of each individual, and not the fostering of athletics and sports. As Mr. Kroh's papers will be printed in the *Elementary School Teacher,* this will not be quoted at greater length.

The subject of the evening, "The Stages of Physical Growth and Development in Their Relation to School Work," was presented by Mr. James Tufts, head of the department of philosophy in the University of Chicago. He said that the subject was one which showed how little we knew in regard to it, as well as the large number of questions that could be asked in connection with it. Did the period of rapid growth mean that the child should study more; that all his powers were quickened; or that the physical was being developed at the expense of the mental, and that therefore he should study less? The many queries before the student for investigation could only be introduced in one evening. He used four charts, prepared by Mr. Gore, in illustration. The first two showed the percentages in height and weight. From ten and a half to eleven and a half years the boy came nearest to an absolute stop in his increase in height, while between eight and a half and nine and a half the girl had already begun her fastest growth in height. This was a period of fatigue. Some said that this was due to its being the second period in dentition. Dr. Stanley Hall thought it might have to do with a period in the development of the race — a time of pigmy height. It was certainly a period when parents needed to be on the watch, and the school must fit its work to the child.

In contrast to this halt in growth, the adolescent stage was a period of rapid growth. The great question was what should be done with the girls at this age. Now nothing different was done. Did the rapid growth mean that they were strong and vigorous all around? Or was there such development of the body that the mental suffered? Another chart gave the ratios of resistance — the "life-intensity," as named by Dr. Hartwell, of Boston. It was shown that this was the age at which few girls die. Was it therefore the strongest period, and the one when they were best fitted to work? In the marking of a chart showing the ratio of disease, the line was almost the opposite, demonstrating that the girls pulled through with a good deal more of sickness. This chart was made from statistics gathered in Scandinavia and Germany, and might not apply equally to American children. It was certainly a serious question for educators. The present status of women in high schools and colleges was not all that could be desired. They represented a smaller proportion of women who married and bore children. Was this due to college training, or to physical conditions? It had not been decisively stated, but there ought to be careful and earnest study of this point. Was it due to the college or the high school? Certainly, there was an evil somewhere. In the case of the boy it was less pressing.

Mr. Tufts presented another chart, made from observations of children in Italy. It was a chart of morals or faults, and the question might be raised whether it was equally true of American children. The other charts were made from observations of forty-five thousand American children.

Mr. Gore said that it was interesting to note that the line in the moral chart coincided very nearly with that of the disease chart.

In the discussion that followed, these and other questions were asked: How do children in rural communities compare with city children in these stages of physical growth? Was the percentage changed in mixed nationalities? etc.

Mr. Tufts said that there must be investigation to get at the laws of growth. The reasons for the development of the girl before the boy were hidden back in the development of the race and were open to speculation. In the more favored classes, the height averaged two inches higher than in the less favored during the earlier years. Ultimately they came out about the same. There were strong claims that the children of today have greater height than those of the preceding generation. He thought this period of rapid growth ought to preclude severe mental work. If the girl could not be taken into an entirely different environment, so that the strain under which she lived could be removed, then the studies which taxed her the most should be diminished, and there should be much out-of-door life. The studies best fitted to a child during this time should be worked out.

Mr. Atwood said that what had impressed him most in the charts was that the period of greatest depravity (if one might so speak) was at the point of greatest break in the present educational system. It all emphasized to him that a revolution must take place, that then the technical studies must not be forced, but rather science and what tended to outdoor life.

After a brief business session, the meeting adjourned.

EDITORIAL NOTES

Education as Creation

Education in its highest sense is the result of creative processes. Its value in any generation is measured directly by what that generation brings forth as a creation which is new, and but indirectly by what it produces that is merely an imitation of the old. Production is primary, conservation is secondary; conservation, indeed, can be assured only when production creates from old things new forms that are consecrated to higher uses.

The materials, it is true, are as ancient as the foundations of time; but every generation, every race, and every individual, so far as there is genuine education, weaves out of this primitive wealth combinations and results that are distinct creations. If he is to have an educative growth, every human being, from his earliest years, must be a creator. The school and home are truly educational only so far as they provide materials suited to the creative abilities of children, and furnish an immediate stimulus for their exercise.

A False Psychology

The theory that the educational process is essentially imitative, and not creative, especially in the formative years of childhood, is as old as psychology itself, and in practice today the proposition stands almost unchallenged. It is the prolonged and general acceptance of this theory that renders it so difficult to initiate and carry forward the reforms that are most needed in the educational field. Yet the psychologist who evolved the notion could not have been more serenely unconscious of the facts had he been theorizing in a childless world. Most of the psychologists since his day, disciple-like and equally blind, have merely passed along the fallacy of their masters. This idea is an interesting but mischievous relic of the old and primitive "faculty psychology" that prevailed a generation or two ago, and it is extremely unfortunate that it should still so completely dominate the field of elementary as well as that of higher instruction. Nobody, at present, believes in education by sections: the sense at one time, the intellect at another, and the will at still another. It is no less absurd to assume that a distinctly imitative period must precede the creative.

Genesis of Imitation in Education

In the past, however, other reasons have existed for laying stress in education upon imitation rather than upon creation. Under pre-evolutionary conceptions, the creative individuals were always regarded with suspicion. In unnumbered instances they were killed off without due process of law. In our own enlightened day, under the influence of atavistic instincts, even we sometimes follow them to the limits of ridicule and slander. Controlled by such notions, the parent became the model for the child, and the ideals of the race were fixed by tradition. There was nothing to do but to imitate; nothing else was safe. The children, made to feel that they were actually bad *like some example of wickedness,* were taught that they should be good *like some type of virtue.* Therefore, the prominence which is given to imitation in education is due more to an old and all but discarded theory of human life than it is to scientific conclusions derived from modern psychology.

Enlightened thought now demands that the teacher and parent shall solve the difficult problem of substituting in the curriculum *as its basis* original work which is *creative* for imitative work which is *illustrative.* The task is most perplexing, because the entire machinery of the schools, from the curriculum to the details of the recitation, has been fitted up for work of the illustrative type.

Marks of Creative Work

Creation involves three things: *initiative, form,* and *organization.* That is, the motive must originate with him who creates; the choice of form must be his, and the whole must be organized in accordance with his ideas concerning the properties of materials and the fitness of things. For example, a shelf may furnish the motive for a decoration; the form chosen may be that of a vase, and this may be constructed (organized) from materials, new in such creations, and in keeping with a design entirely unique. Such work is truly creative, and as a type it is but rarely found in school. The average curriculum is formed on the theory that the pupils are imitators, not creators, and consequently it is imposed. The daily lessons, in scope and character, and the modes of expression are prescribed, and all the activities of the school are reduced as nearly as possible to that monotonous routine known to the devotee of system as "regular work," which offers no play for the creative intelligence in either thought or deed.

The Entering Wedge

The constructive idea now being realized in various forms of hand-work represents the thin end of the wedge that is opening the way to reform. Anything which involves the hand immediately arouses the creative instincts. Much of this work, however, is still of the illustrative type, merely reproductive, or imitative, and in the beginning it was all of this character. In wood, for example, the "exercises" were all once manacled to a set of models that made no claim upon the creative powers through either their use or their beauty.

Constructive Idea Applied

At present, nearly all subjects in the curriculum make some application of the constructive idea. The lessons of history are vivified by reproducing typical creations of other days. Science becomes somewhat more real by the performance of more or less well-selected experiments set by book and teacher. Mathematics has been improved through its applications to prescribed construction. Something of both the technique and the spirit of art is acquired by reproducing the work of the masters. This all represents a distinct improvement upon the old régime of books and lectures, and such exercises will always form an organic and necessary part of an educational system.

The High-Water Mark

But the high-water mark in school-teaching will be reached only when such work becomes secondary because it is supplementary and subsidiary. Only when the dominant note of the school is clearly creative does it lay direct hold upon the vital and continuous interests of the children and become essentially educative.

This is true regardless of subject-matter or material on the one hand, and age or sex on the other, and to this fact some curious schoolroom phenomena are due. Patrons of the University Elementary School frequently marvel that the boys of all ages delight in cooking and textiles, while the girls are equally interested in woodwork and other forms of heavier manual training. The reason, however, is clear. It is not that there is anything inherent in either the dough, or the cloth, or the wood, or the iron, but rather because the work under all these heads is largely creative. In none of these does the essence of the study consist merely in blind adherence to a prescribed recipe or pattern; nor is it solely concerned with a perfunctory analysis of materials. It is because an aim is set up that is unique; it is somewhat new because it is personal — it is because the ages-old materials must be combined to fit new occasions that the interest is enlisted and the best original efforts, and consequently the highest educational results, are obtained.

Interest is in Creation

In early years the creations take visible form largely in wood, clay, cloth, and other materials. But under the influence of right motives, along with the growing outward forms, there start up unconsciously within the child the tender germs of æsthetic and moral ideals which, gradually taking on more and more robust growth, finally make the man a leader and a prophet in his generation.

The shifting of the curriculum to a creative basis will greatly modify its present form and function. Hitherto, we have sought knowledge of the future controlled by a belief in the past; hereafter, we shall seek knowledge of the past inspired by a belief in the future. History is not a thing apart; it should be presented as a vital aspect of every activity because it is necessary to its intelligent development. This will change the continuum of history, now zealously adhered to, from a serial and chronological chain of events to the gradual organization of all the facts that lie at the foundation of the different activities in present life.

The New Curriculum

History

Through the direct study of nature, supported by history, the pupil will learn by degrees what the real material and ethical problems are for his generation, and from nature's substance and his own resources by his own creative methods he will attempt their solution.

Science

Every creative activity will have its artistic aspect; for when the soul enters a creation, then and there art is born. Art-forms are now rarely creative. They do little more than tickle the sense with the pleasures of a fleeting hour — and they are worth all they cost for that! But when the lives of the children are properly enriched, music, painting, drawing, sculpture, and the rest will come forth as creations — the radiant allies of speech. In language growing fluent and supple, the pupils will learn to wreathe in descriptive, dramatic, and poetic forms the subtlest creations of which the human mind is capable.

Art Creations

Creative work transforms the individual. Through it, alone, he grows and maintains a personality that makes him different from others. Through it, alone, his generation rises above all that have preceded. Imitation is a training in conformity. It holds the creative instincts in abeyance until at maturity it is the exceptional man or woman who is not hopelessly bound by the shackles of convention. If he would ever create, he must override the prejudices ground into him by the schools, and, even then, the daring freedom of childhood but rarely comes again. The gospel of conformity teaches that the best has been done — that naught remains for us but imitation. This, too, in face of the practical fact that the discoveries of today have sent to the scrap-heap the brilliant inventions of yesterday! The effect is not less marked in the realm of morals. Generally speaking, the ethical code of the school has been copied from that which once served the purpose of the generation that developed it, but it is far below what, under present conditions, the pupils can create for themselves.

Creation Transforms

Reforms and Expense

There is widespread opposition to reform in education on the grounds of expense. It requires more money now for the proper maintenance of a school, it is true, than it did a generation or two ago. But the added expense is only an incident of the times: just as our grocery bills have expanded mainly from causes not directly related to the things we eat. The real difference between the old and the new in education is not financial, but spiritual. It lies in the new views now held concerning the individual and his functions as a member of society. Education is a practical matter, and, therefore, the best is always the cheapest. A creative and productive member of society will increase the resources from which the support of the schools may be drawn; while the imitator of outlived results entails upon the social body a perpetual loss. It is not a question of finance, therefore, but of vision.

Trained Teachers Needed

The era of education as a creative process will be marked, not by its material resources, but by its teachers. Our schoolhouses are good enough: now, let there be trained teachers, then we shall have schools. Such teachers will be equipped, of course, with knowledge; but above all they will be trained in discernment—in the power to see and appreciate the fundamental things in human growth and in its output of character. They, too, must be creative, and, to create, they must be free. The present system that grinds and chafes at every move was developed under archaic ideals, and it has therefore become in large measure antiquated and useless. The organization of the schools must grow out of the professional necessities of the teachers, the greatest of which is that even the poorest shall be free to put the best of himself into his work. Under such conditions, every teacher and every child will become a positive creative moral force in the upbuilding of the social structure.

W. S. J.

BOOK REVIEWS

Pioneer History Stories. By CHARLES A. MCMURRY. I, *Pioneers on Land and Sea;* pp. 261. II, *Pioneers of the Mississippi Valley;* pp. 218. III, *Pioneers of the Rocky Mountains and the West;* pp. 248. New York: The Macmillan Co. $0.50 a volume.

In publishing these stories of frontier life and adventure, Professor McMurry indicates the kind of subject-matter which he thinks best adapted to the study of history in the fourth and fifth grades. The reasons for his choice are that the conditions of our pioneer life are so simple that they may be appreciated and understood by a child of nine or ten years, and that a comprehension of these conditions is necessary for an intelligent study of our national development.

These texts are a great improvement on the ordinary "first books of history" in that, while they tell of persons and events that have had a large place in our national life, they are not mere compilations of facts, with the mature conclusions which historians have drawn from these facts, but the stories are living, and the child really feels the problems and difficulties which his ancestors had to meet, and he too solves them over again for himself. This making of the problem his own insures the child's development.

In order that the teacher may take up first the stories of local interest, the author has arranged them in three groups corresponding to the three great divisions of the country. Since chronology is not important in this first study of history, why should a teacher in Kentucky start with the story of Columbus rather than that of Boone?

While it is true that children of nine or ten years will read these stories with interest and appreciation, they may be used almost as well as "supplementary reading" in such schools as follow a different course of study from that recommended by Professor McMurry. They will stimulate further independent reading, and awaken an interest in our pioneer history which will last longer than the recitation period.

The Louisiana Purchase, and the Exploration, Early History, and Building of the West. By RIPLEY HITCHCOCK. Boston: Ginn & Co. Pp. 349. $1.25.

This book fills a need in the textbook field. Although the exploration and development of Louisiana territory are treated in other books of history, they are treated either so briefly as to be of little help to the child, or so exhaustively as to discourage the average student of grammar-school or high-school age. Mr. Hitchcock is the first to present a text on this period of our history which is sufficiently detailed and yet compact and written in narrative form, and published at a price which does not prohibit its being in every school library.

In ninety-four pages are described the exploration and acquisition of Louisiana by the Spanish and the French, and its purchase by the United States.

One hundred pages are devoted to Lewis and Clark's expedition into the northern part of the territory and the Oregon country. The later explorations, from those of Pike to those of Bonneville and Frémont, are described too briefly in thirty-nine pages. The rest of the space is devoted to "The Building of the West." In the long appendix each one of the states carved from the Louisiana Territory is treated as to area and increase of population, agriculture and manufactures, with tables showing the growth of raw and manufactured products, and a résumé of the more important historical events with dates. The index increases the usefulness of the book as a work of reference.

An Elementary American History. By D. H. MONTGOMERY. Boston: Ginn & Co. Pp. 306.

This textbook, the latest of the "Montgomery Series," "has been prepared to meet the demand for a short continuous narrative history of our country, suited to the wants of elementary pupils." Compared with other textbooks of its kind, it has merit. The language is simple, and there are many illustrations and maps.

However, at the best, a United States history of this size can be only an outline, a statement of facts in chronological order, a series of generalizations and abstractions which have little educational value unless worked out by the pupils themselves. This is only another example of a book constructed on the college plan, with shorter paragraphs and more simple language. The supposition seems to be that the child cannot understand the language of the larger book, but that he can understand the complex political situations of the past, and that to memorize the more or less isolated facts is to be learning history.

Running the River. By GEORGE CARY EGGLESTON. New York: A. S. Barnes & Co. Pp. 295. $1.50.

The adventures of three brothers and a sister in managing a "store boat" on the Illinois River before the days of railroads in the region. Full of information, but written with little comprehension of the keenness of children in detecting the unnatural and pedantic in boys and girls, even in a story, and the consequent rejection of their companionship.

HARRY O. GILLETT.

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Elementary School.

Elementary Algebra. By J. H. TANNER, PH.D., Assistant Professor of Mathematics in Cornell University. American Book Co., 1904. Pp. ix + 364. $1.00.

Another number of the "Modern Mathematics" series, of which Professor Lucius Augustan Wait, of Cornell University, is general editor, has recently appeared in this text. The high reputation of the series for scientific excellence and logical rigor is a sufficient guarantee of the excellence of this volume in these particulars. The criticism we have to offer against the secondary texts in this series is that they formalize, to an extent quite unattainable by a high-school student, the subject-matter treated. This book is not exempt from this academic weakness. This is, of course, "a failing that leans to virtue's side," but still the extent to which this is carried makes it a decided failing.

In the preface of this work the author tells us that one of the problems of the writer is "to make the transition from arithmetic to algebra as easy and as natural as possible." With the second aim the reviewer is in full accord. The first does not seem to be a matter of so much consequence. Pupils like to do hard things, if they seem worth while. The aim of secondary work in mathematics should be not so much to carry the pupil along easily as to elicit his interested attention by filling him with the belief — with the conviction — that the mathematical ideas, method, and machinery upon which he is called to spend so much time and energy are worth all they cost from the view-point of modern demands upon American citizens. This can be done only by giving him work that rings of the genuine. If algebra, geometry, and the rest of the mathematics of the high school cannot vindicate themselves on the basis of meeting the actual demands of our industrial and economic life, they will remain, as they are now to a lamentable extent, mere curios, attracting only the dilettante frame of mind, and playing no vital part in the work of educating youth. What we need most of all in an algebra is real problems comprising modern ideas and modern conditions, and opening up lines of thought through which the pupil may grow into a fuller and more masterful knowledge of those phases of life with which algebra is peculiarly well adapted to deal. In a word, we need less form and more substance.

Many of the problems of this book are excellent in this regard, however. The pupil will catch a thrill of interest in many places, though the strain to make the subject fundamentally scientific and logical is too evident, and it will operate to nullify the good effects of these problems. Deductive reasoning must be approached gradually as the need for it is felt by the student. It must be *taught,* not merely *exhibited* and *exploited.* Definition and rule and fundamental, logical presuppositions dominate the development of the subject here, but modern pedagogic thought has entered to the extent of vitalizing many of the lists of problems. In spite of these formal defects, however, this is one of the most suitable textbooks for high-school algebra now on the market.

G. W. MYERS.

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BOOKS RECEIVED

The Southworth-Stone Arithmetic. Books I, II, and III. By Gordon A. Southworth, Superintendent of Schools, Somerville, Mass., and John C. Stone, Associate Professor of Mathematics, State Normal College, Ypsilanti, Mich. Boston: Sanborn & Co., 1904. Cloth, 12mo. Book I, pp. 198; Book II, pp. 260; Book III, pp. 308.

Four American Indians. By Edson L. Whitney and Frances M. Perry. With Illustrations. New York: American Book Co. Cloth, 12mo. Pp. 240. $0.50.

Kayser and Monteser's Brief German Course. By F. C. Kayser and Frederick Monteser. New York: American Book Co. Half Leather, 12mo. Pp. 363. $1.20.

Maxwell's Elementary Grammar. By William H. Maxwell, City Superintendent of Schools, City of New York. New York: American Book Co., 1904. Cloth, 12mo. Pp. 208.

Moral Education. By Edward Howard Griggs. New York: B. W. Huebsch, 1904. Cloth, 12mo. $2, net.

Common-Sense Didactics. By Henry Sabin. Chicago: Rand, McNally & Co., 1903. Cloth, 12mo. Pp. 343.

Mace's School History of the United States. By William H. Mace. With Illustrations by Homer W. Colby, H. W. Dietzler, and Denman Fink; Portraits by Jacques Reich. Chicago: Rand, McNally & Co., 1904. Cloth, 12mo. Pp. 465 + xcv. $1.

Notes of Lessons on the Herbartian Method. By M. Fennell and Members of a Teaching Staff. New York: Longmans, Green & Co., 1902. Cloth, 12mo. Pp. 270.

Argumentation and Debate. By Craven Laycock and Robert Leighton Scales. New York: The Macmillan Co., 1904. Cloth, 12mo. Pp. 361.

A History of Education in the United States. By Grant Dexter. New York: The Macmillan Co., 1904. Cloth, 12mo. Pp. 656. $2, net.

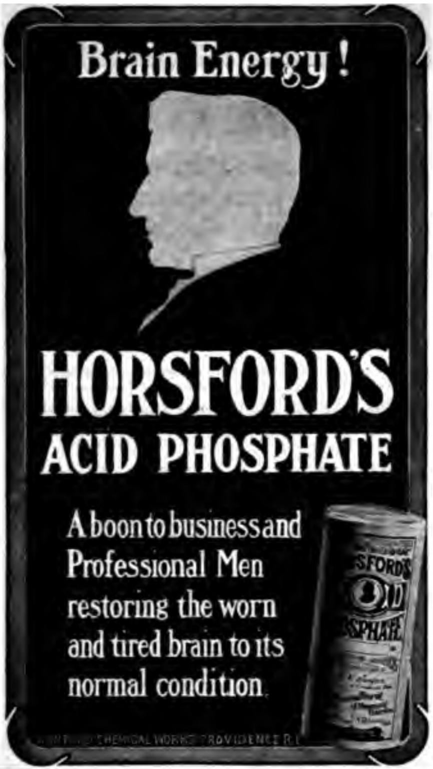
Government and the Citizen. By Roscoe Lewis Ashley. With Illustrations. New York: The Macmillan Co., 1904. Cloth, 12mo. Pp. 252. $0.70.

Excursions and Lessons in Home Geography. By Charles A. McMurry. New York: The Macmillan Co., 1904. Cloth, 12mo. Pp. 152.

Children's Gardens. By Louise Klein Miller. New York: Appleton & Co., 1904. Cloth, 12mo. Pp. 235.

The Vicar of Wakefield. By Oliver Goldsmith. Edited, with Introduction and Notes, by Louise Maitland. New York: Appleton & Co., 1904. Cloth, 12mo. Pp. 265.

Shakspere's Tragedy of Julius Cæsar. Edited for School Use by William Hammond McDougal. New York: Appleton & Co., 1904. Cloth, 12mo. Pp. 158.



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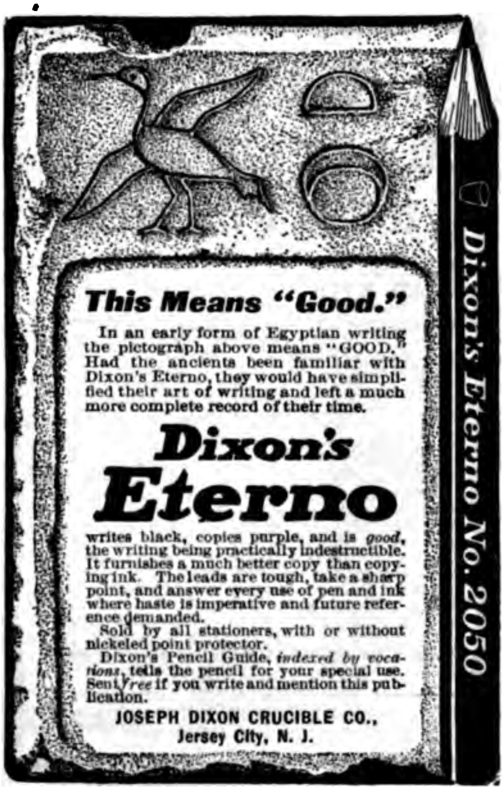

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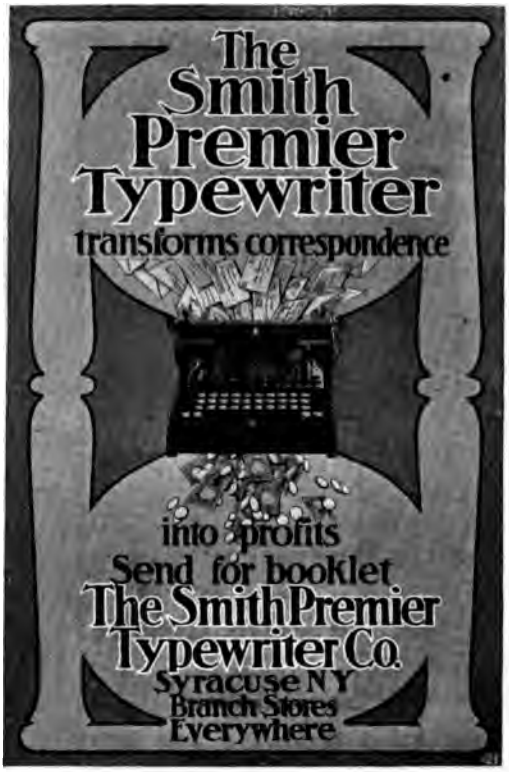

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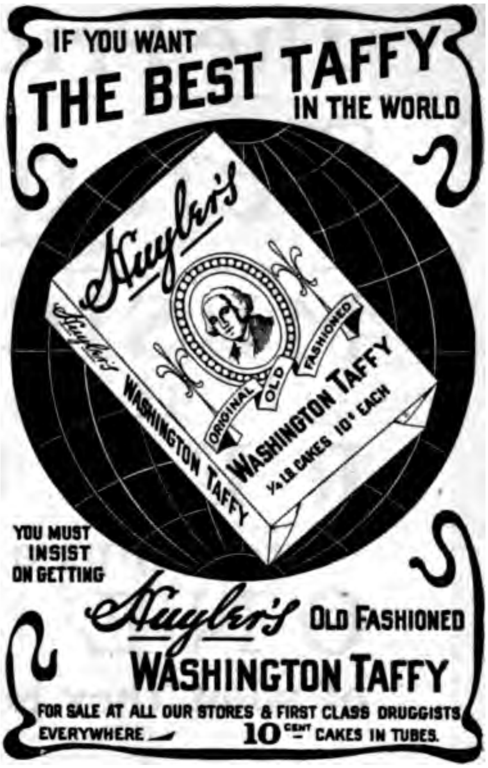

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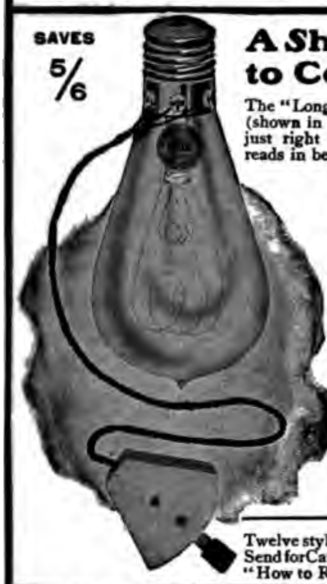

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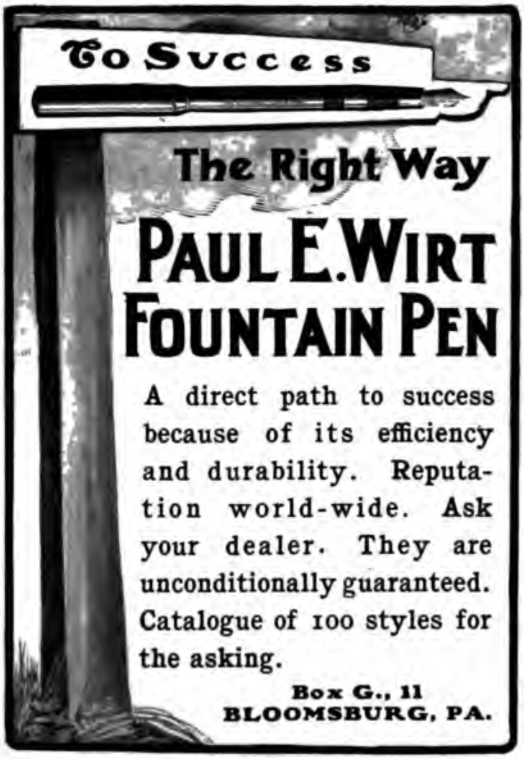

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CONTENTS FOR MAY, 1905

HISTORY IN THE UNIVERSITY ELEMENTARY SCHOOL - - EMILY J. RICE 521
HISTORY IN THE FIRST GRADE - - - - - - - ELSIE A. WYGANT 524
HISTORY IN THE SECOND GRADE - - - - - - - ELSABETH PORT 528
HISTORY IN THE THIRD GRADE - - - - - GUDRUN THORNE-THOMSEN 531
HISTORY IN THE FOURTH GRADE - - - - - GERTRUDE VAN HOESEN 536
HISTORY IN THE FIFTH GRADE - - - - - - CARRIE M. PIERCE 540
HISTORY IN THE SIXTH GRADE - - - - - - - ANNAS HIGGINS 544
HISTORY IN THE SEVENTH GRADE - - - - - HARRY O. GILLETT 547
HISTORY IN THE EIGHTH GRADE - - - - - KATHARINE M. STILWELL 552
SEED AND SOIL - - - - - - - - - - - - AGNES W. O'BRIEN 556
TEACHING AND STUDY - - - - - - - - DR. THEODORE B. NOSS 563
WORK IN THE CARLISLE INDIAN SCHOOL - - - - ANNE H. STEWART 571
THE COLONEL FRANCIS W. PARKER MEMORIAL FUND - - - - - - 574
EDITORIAL NOTES - - - - - - - - - - - - WILBUR S. JACKMAN 576
An Organization Versus An Aggregation; Drill-Work Anti-Social; Social Organization Through Play; Social Organization Not Through Play Alone; The Genesis of Fraternities; The Chapter House; Group Influence; False Reasoning; The Real Solution.
LITERARY NOTES - - - - - - - - - - - - - - - - - - 583

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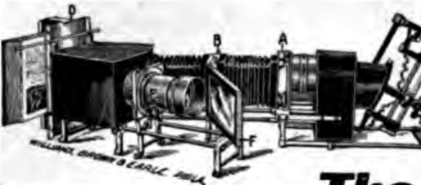

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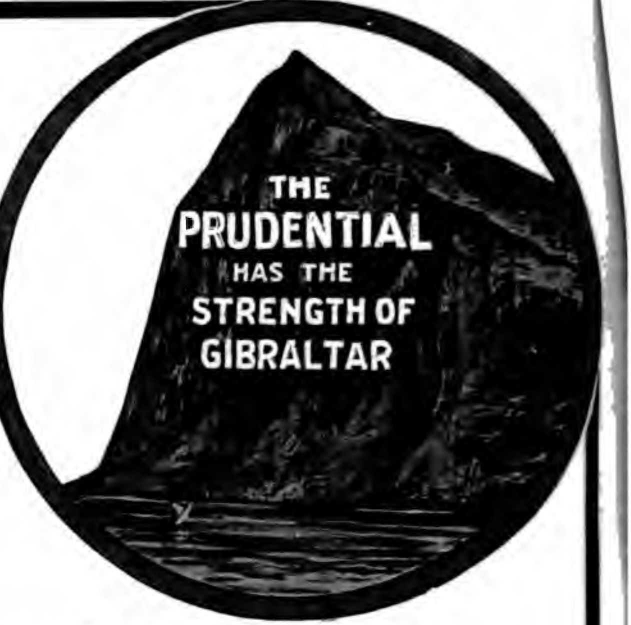

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VOLUME V NUMBER 9

THE ELEMENTARY SCHOOL TEACHER

MAY, 1905

HISTORY IN THE UNIVERSITY ELEMENTARY SCHOOL

EMILY J. RICE
School of Education, Department of History

The study of history in the University Elementary School begins with the first grade. That history is not used for the younger children in most schools is due, I believe, to the fact that people usually think of it as relating especially to political and governmental affairs. The average person, when asked why children should study history, says: "To cultivate patriotism, and to fit the children for citizenship;" meaning by this, for the duties of the voter. On the other hand, in the last few years the study of social science and economics has changed to some extent our views in regard to the nature of history, and shown us that political conditions depend largely upon industrial conditions. Much more emphasis is now placed upon industrial and social history in higher institutions than formerly, and much more attention is given to them in the writing of history. The lower schools have not yet adjusted themselves to the new conception.

At the same time we are considering the children more carefully than ever before. Psychology and child-study have turned our attention in that direction, and have taught us that the children can make their own only such knowledge as their experience helps them to interpret. Their interests are in present life, and the past appeals to them in just so far as they can find themselves in it, with their activities, their thoughts, and their feelings.

They are living intensely in the things of the present, and their environment is putting very interesting questions to them. The history that connects with these questions becomes theirs. All the rest is mere information. Now, information is not in itself of very great importance. It is the use which we make of information that gives it its value. It is not knowledge, but the application of knowledge, that gives power. The problems of the children are as serious to them as ours are to us. To find these problems and help them to solve them in the light of the experiences of others is the teacher's task. These problems are rarely political ones, not even in the highest grades, nor chiefly in the high school. The children are not required to take a part in the affairs of the state and nation. They are interested in social life, and in occupations in which they themselves are taking a part, or in those with which they come into direct contact. A knowledge of past social and industrial conditions related to their experiences should help them to understand the life about them and to act their part in that life.

The weakness of the old system lies in the fact that the teacher gave the tasks to the children and the children worked without any impulse from within. They learned lessons set from the outside. It is evident that we all learn most easily when we ourselves need the knowledge that we are striving to gain. Many a boy finds it impossible to master mathematics at the dictation of the teacher, but, when out in business, acquires that same mathematics without difficulty. The little children have learned much before they come to school. They have learned because the things about them put questions to them. They have inquiring minds, and are continually saying, "Why?" The answers to these questions are their introduction to science and history. The race built up the arts of civilization before the formal school was invented; for the school is a comparatively modern institution. It was the necessities of life that led man to exploit his environment, to experiment with materials, and to work out processes. The school that separates study from life, from experience, is artificial in its methods. It is usable knowledge that keeps the school in natural methods of study.

Much of our history is based upon the occupations of the school. When the children are themselves making anything, they are interested in the work of other people in the same directions and in the history of that industry or art. Creative work is the center of the course of study for the younger children, and often the point of departure for the older grades. But as the children gain in power, their study of history is gradually differentiated from the occupations and the other studies. Still, even in the high school specialization should not be carried so far that the relationships of study and experience are forgotten.

The children of the primary grades find their problems chiefly in the home. They are interested in what people are doing, in action. They like to share in the occupations of others, and they dramatize in their play these occupations. At home they make playhouses, cook and serve meals, and dress dolls. These things that they do put questions to them — questions that are rarely answered in the home, at least in such a way as to give the child added power over his own experience. In school the occupations may be so organized that they form the natural entrance into the field of knowledge in science and history.

The interests of the children in the middle grades take in the larger social group, the neighborhood — here the city — with the occupations of the people, their trade and commerce, and our public works. Pioneer life is very close to the sympathies of the children, and we have in this country an abundance of material for it both in our local history and in that of earlier colonies.

Our history from the time of the Revolution has heretofore been written almost entirely from the political standpoint. Our textbooks tell of the rise and development of political parties, of states' rights versus national sovereignty, of office-holders, and of war. With these political questions the children have no vital sympathy. But there is an industrial history of the period that is very attractive to them. Our people have pioneered their way across the continent, developing the resources of the soil, and this industrial conquest underlies our political history. This story has not yet been written for the children in any degree of fulness; but, when it is, there will be a new charm in the study of American history in our elementary schools. We are accustom our history as dull and uninteresting as compare other countries, but I have found the "evolution o as fascinating to children as the age of chivalry.

With children of the highest grades politica play a more important part, and the relation of ou other countries may be more definitely shown. Th tact is often to be found in current events. The child to interpret and apply what he learns tells us in any one direction.

It is the application of all our work that is, important thing. We cannot expect children to eight years in the elementary grades, and four secondary school, never making any use of what t then to go out into the world and become activel the public good. The habit of putting thought in be cultivated. Thought and action should go toget our school course; for the power to serve is the te of an education.

HISTORY IN THE FIRST GRA

ELSIE A. WYGANT

The work of the first year in the beginnings o be expressed better by the term "social occupatio no sense that systematic record of past events to "history" is usually applied. The work is from of industry, and its background is the immediate ment.

We feel that this environment is a most com that the unthinking acceptance of it by children lea tion and lack of appreciation. Therefore we h element from it, the house, to see its evolution and its producers to society. As a clue to the myst choose food or clothing, or any one of the nece but, because in our experience house-making gives tunity for the children's imitative activities, and because the finished product, a playhouse, is so essentially fitted to the desires of a six-year-old, we have chosen this phase.

The question of modern food-getting, with its source in the farm, and the activities which this suggests, is very alluring. But to the child in Chicago, who has had only summer glimpses of a farm, or worse, gets his conceptions of farm life from single-day field trips, the work cannot carry the real spirit of the workers. Nor can his crude attempts to work out a process be enlarged and vitalized by sufficient comparison with the way in which skilled workmen do the actual work.

On the other hand, the work of house-making and furnishing is going on about city children all the time. They come in contact at every turn with those industries which include architecture, house-building, floor-covering, wall-papering and decoration, drapery, and furniture-making.

For several years we have made individual playhouses. Each child constructed his own house in the manual-training room and furnished it completely. This method had the great advantage of giving each child free choice in design, and when the playhouse was completed, it was his to dispose of as he would. This year we decided to co-operate in the making of one house. This decision largely grew out of the conviction that so permanent a thing as a playhouse should be more sightly than any we had ever been able to secure through individual effort. An object that is so long in the making and is used as a toy so long afterward should be of sufficient beauty to serve as an element in the children's growth in taste.

The first of the year, through pictures and buildings, different types of architecture were shown the children — Greek, colonial, and old English being emphasized. At Beverly Hills two houses of the old English type were seen, and this style was chosen for our playhouse. Mrs. William M. R. French made the drawings and plans for the outside of the house in most completely workmanlike manner.

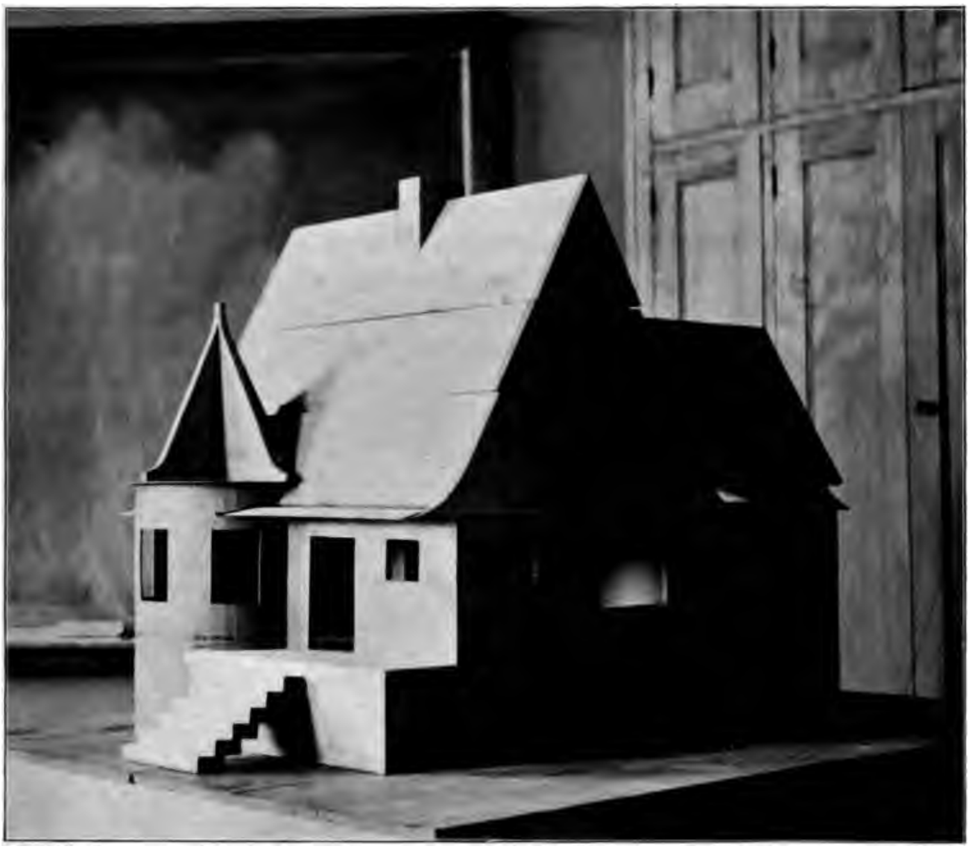
During the fall quarter the history time was spent in choosing the kind of house and in considering the labor involved in the making of houses. The children counted twenty-nine classes of laborers who work upon a house directly. When the more indirect forms of labor, such as lumbering, quarrying, stonecutting, transportation, etc., were traced out, their idea of the interdependence of the workman was widened. When this was enlarged by the idea of the exchange of commodities, in that the builder, for instance, needs food and clothing and recreation, the children were fascinated by the labyrinth. They enjoyed very much the story of "The Old Woman and Her Sixpence" told in this connection.

For the sake of contrast, we turned from this complexity and division of labor in modern shelter to primitive dwellings. The children were told of the tree-men and cave-dwellers, and delighted in discussing how they obtained their necessities. Because of the greater amount of material available, and the children's greater familiarity with the North American Indians, we planned out the possibilities of their life more in detail. We built an Indian village on the sand-table, making all things as nearly as we could as we imagined the Indians must have done without our tools. To find how the poles were cut for wigwams, how the skin was fastened for the cover, and many other details, we spent a morning in the Indian section in the Field Museum.

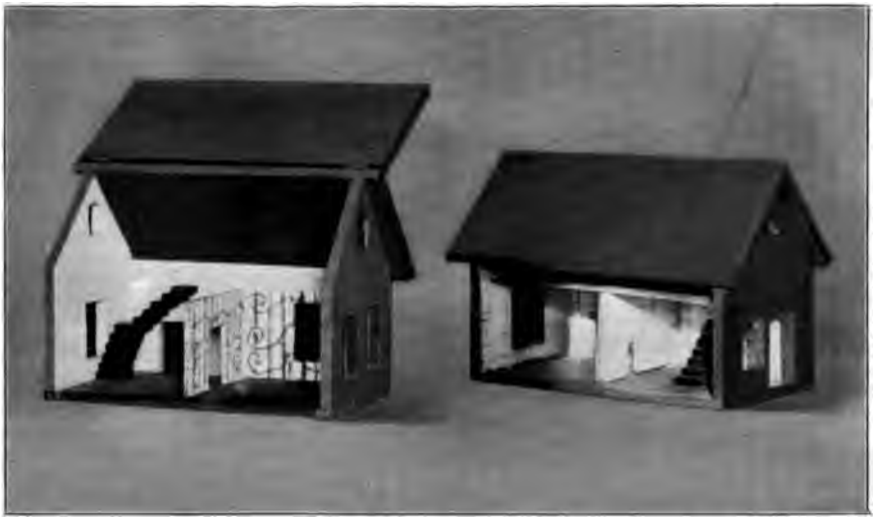
The children of the second grade this winter are studying Eskimo life, and they have made models and written stories for the first grade concerning Eskimo house-making.

The first grade is hearing stories of a tropical land, and will plan and make a suitable shelter for these conditions. So the idea of shelter as growing out of conditions and environment is building up more or less clearly as the individual child is more or less philosophic and analytic in his turn of mind.

The house we are building is made of Ralston Food boxes. The east and west ends of the main part of the house are hinged so as to swing back to allow for work and play in the house. In these boxes the children make the door and windows, and fit the partitions. The stucco effect they plan to make by using sand paper, and the open timbers are made of ¼-inch wood, the design for which the children have themselves worked out. The base-



GROUP PLAY HOUSE—FIRST GRADE



INDIVIDUAL PLAYHOUSES—FIRST GRADE

ment of bowlders is made of pebbles collected at the lake-shore. The roof is to be made of the corrugated paper, such as bottles are wrapped in, and this will be painted red. The children have planned the interior arrangement of rooms, thus determining the number and arrangement of windows.

In order to make the house movable, it had to be put upon a platform, and this the children have made somewhat larger than the house, and the surrounding space they plan to sod and plant for a garden.

The decoration and furnishing of the house offer continued opportunities for the application of design, and this phase of the art work centers upon the use of design for rugs, draperies, wall paper, tiles, leaded glass, and open timbers. The floor space is sufficient so that each child can design and make a complete rug, but in the wall paper, tiles, and so forth, a small group works on a design, and the most pleasing result is chosen. A stencil is made from this design, and thus it can be applied more accurately.

In the making of the rugs for the floor the children follow out the process, know something of the character and source of the possible materials with which they work, see good examples of various kinds of rugs, and visit a place where they can see the work being skilfully done. Such visits force a comparison between their crude results and the finished product of the skilled worker. So, it is hoped, they grow in taste and appreciation, and in respect for work and worker.

Among the children's occupations are also cooking and gardening, and in connection with these they are studying farm life for some of their lessons in science.

Now that the work is nearly completed it seems only fair to add a word in regard to making one house instead of individual houses.

A fifth-grade boy was seen at work this year repairing a playhouse which he had made when in the first grade and had given to his little sister. It had been a plaything sufficiently treasured to be worth mending five years after it had been made.

Another boy, in the third grade, came running into the school during a heavy rain, begging to be allowed to take another boy and go to secure his playhouse, which had been taken from him two years ago and which he had discovered in a back yard not far from school. No arguments as to rain, or that possibly the playhouse was not his, were of any avail. He went, got the house, proved his ownership, and is now putting it in order after school in the manual-training room.

These evidences of the personal value which the children place upon their work, and the continued pleasure which the houses have afforded, are strong arguments for individual ownership. At the same time, they emphasize the necessity for houses which are beautiful. Therefore another year the children will be given the opportunity to make the individual houses, striving constantly to get good proportions and a pleasing outline, but sufficiently simple so that each child may plan and carry out a complete piece of work.

HISTORY IN THE SECOND GRADE

ELSABETH PORT

The children come to their second year of work in school still new enough in the world to view with interest many of the everyday activities that have come to be a matter of course to us. They are also beginning to wonder and inquire into the beginnings of these complex processes. These two facts, together with their growing love for discovery and experiment, have determined the two branches of work, social and historical, which, it is hoped, will illumine each other.

In their first year the children had done cooking and gardening, and had had the subject of food and its source, the farm, as one of their great centers of work. In the fall of this year they worked again on the subject, this time with a view to finding out chiefly the history of food after leaving the farm. At the same time, in order to give more meaning to our work by contrast and also to get at fundamental processes, we worked out some of the primitive ways of procuring and preparing food. However, it is impossible to do the cooking and play at hunting without getting somewhat into other primitive occupations. And the subject is so large and so interesting to children that the time was all too short.

The children, fresh from contemplation of South Water Street and its abundance, were asked what they would do for food if they were left on an uninhabited island. This, of course, was comparatively easy, and they brought from home fruit, nuts, oysters in the shell, and water-cress, in order to have a feast of the things that could be found and eaten with no further preparation.

When this island of theirs was wooded and the forests filled with wild beasts, we had the conditions of early man. The physical conditions, however hard to realize, are easy in comparison with the attempt of the children to strip themselves in imagination of the knowledge that civilization brings. This I believe that they can do only to a very limited extent. They are, however, fertile in suggestion. They worked with great vigor on a diminutive pitfall, digging with pieces of slate and broken shells. They made formidable weapons by binding stones to sticks with strips of leather, and they chipped flint by the half-hour in the vain hope of getting a creditable spearhead.

When it came to the making of fires, they worked with even greater eagerness. They rubbed sticks until their arms ached, they got from flint infinitesimal sparks seen in the dark, and then regretfully and with a dawning respect for our very forefathers came to the conclusion that matches were necessary if we ever wanted to cook food. Even with matches it was not always easy to get a good fire, debarred as we were from using paper or prepared wood.

When successful fire-making was accomplished, the children had a series of outdoor cooking lessons. They roasted potatoes and chestnuts, they broiled bits of meat on green sticks, they baked eggs in clay and roasted smelts, they boiled water with hot stones, and so cooked eggs and chipped beef.

If time had permitted, the children could with profit have worked out some of the other changes brought about through the control of fire. The making of brush huts, for example, large enough to get really into, calls forth much ingenuity and hard work. Many of the incidents in the *Story of Ab,* which was used constantly for historical setting and picturesque background, would have made good bases for work. The children's interest in the story never flagged, and Ab became a very real person to them. On the sand-table they made the surroundings of his cave and the cave itself. The making of the river was our geography, and the siphoning off of the water, our science for the time.

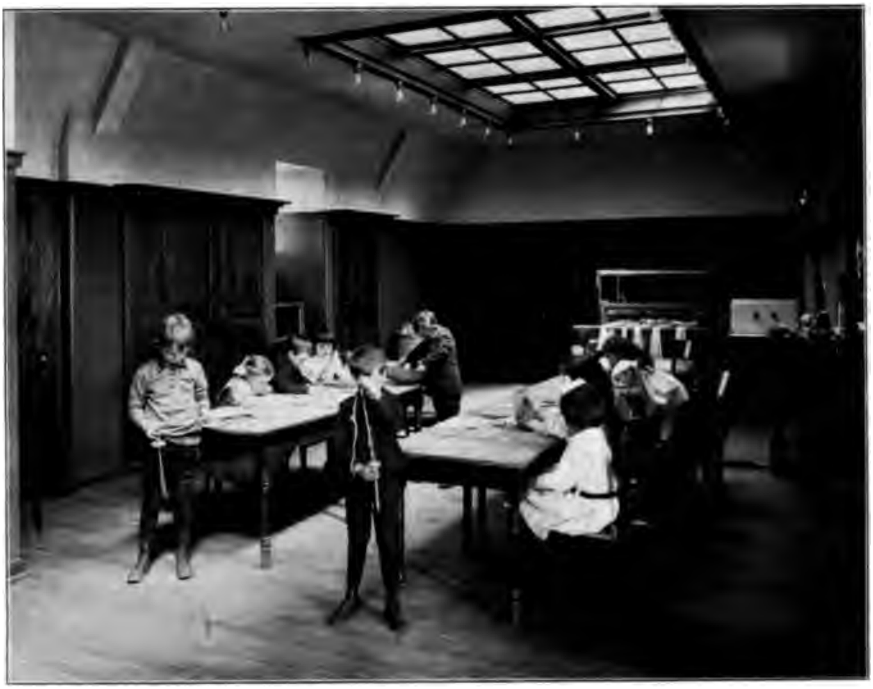
During the winter quarter we took clothing as our starting-point. We observed and discussed the relative merits of the various materials—cotton, wool, silk, and furs. The extreme cold and quantities of snow caused us to linger on the people who use furs for clothing. Here, again, it was impossible to confine ourselves solely to the subject of covering, when the whole life of the Eskimos is so full of interest.

Happily for us, the snow at that time was covered with an icy crust and in just the right condition for making igloos. The children cut blocks of snow and made some very good rounded huts out of doors. When these melted, they were ready and anxious to make others of clay blocks *to keep*. We are making two Eskimo scenes on the sand-tables—one, the winter, showing snow huts, ice-fishing, sledging, etc.; and the other, a summer one, with skin tent and kyak. The children have dressed small dolls with leggins, coats, and hoods. They have also modeled Eskimo figures and Arctic animals. They have, in the meanwhile, visited the Field Museum and its excellent Eskimo exhibit.

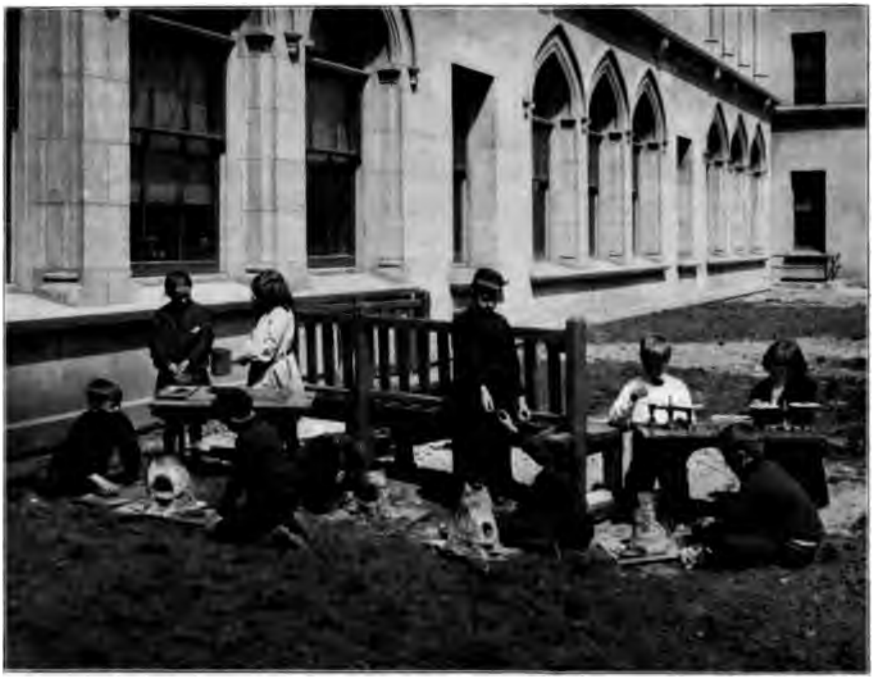
The lamp proves a fascinating article to make and use. They had to mold it of clay as the nearest approach to stone. They next tried out some fat to get oil for burning. Then, with some florist's moss for wicking, the diminutive lamps burned for hours, to the children's unbounded enthusiasm and delight.

Last year we made some satisfactory little ice sleds. The children got the blocks of ice from a frozen pond in the opposite lot, and by means of hot iron rods melted them to the desired size and shape. One little boy was so delighted with his sled that he could not bear to think of its disappearance and kept it safely in the home refrigerator for some days.

In their textile work the children have been working with wool, tracing its history from farm to clothing, and going through



SECOND GRADE CHILDREN IN THE TEXTILE ROOM



THIRD GRADE CHILDREN MELTING METALS IN FURNACES MADE BY THEMSELVES

the primitive processes of carding, washing, spinning, dyeing, and weaving. In connection with this work we take the stage of shepherd life. The Bible story of Abraham is the foundation for this work. We construct in the sand-table the low, rolling, grassy hills as the scene of the shepherd's wandering life. Wells and tents are made, sheep and camels are modeled in clay, cakes of meal are made like Sarah's, and some of the most dramatic scenes are played.

Later we make a desert scene, with an oasis for a wandering Arab tribe. Camels with their traveling packs are added, and in various ways a picture is constructed of this exceedingly picturesque people. The children also try primitive ways of making butter and cheese.

Through all these occupations the endeavor is to give the children a small beginning of appreciation of the simple bed-rock processes and their wide-spreading development.

HISTORY IN THE THIRD GRADE

GUDRUN THORNE-THOMSEN

GENERAL REMARKS

The work in history in the primary grades is a study of types of society in various environments. Some of these types are: the farmer, the hunter, the shepherd. The principal topics in this study have been: shelter, means of getting food and clothing, which include occupations and industries, means for defense, social customs, games, etc. Side by side with the consideration of these topics, which constitute the historic aspect of the subject, the environments in which these types of society were found has been given some attention; this is the geographic aspect of the subject. Forms of shelter, industries, and modes of living in a primitive society are very largely the result of certain external conditions: climate, topographic forms, and soil. In order, therefore, to understand the peculiarities and stage of development of a certain type of society, a study of these external conditions is necessary. The factors which make Eskimo society different from Indian society, and the farmer's life different from that of the shepherd, are largely geographical. In one case we have an arctic climate, with absence of soil and vegetation; in the other case, a temperate climate, with extensive prairies; in one case, valley and river, with fertile soil; in the other, forests, with an abundance of game. To sum it up: History in these grades deals with types of primitive society; geography, with an analysis of various environments, which have surrounded man at different stages of his development.

The reasons why such types of society as the shepherd, farmer, and hunter are taken up in the first and second grades are obvious. The forms of community life on which they are based are extremely simple in all their phases, socially, industrially, and politically. The farmer's or shepherd's life has many analogies in the child's own life; it is therefore easily comprehended, and arouses his interest and sympathy. What the hunter does in a primitive society is closely akin to the things that the child himself would like to do, and very often can do. The problems and ideas which claim the attention of the hunter seem familiar and worth considering to the child in the first and second grades.

As before stated, the social, industrial, and political organization of these types of society are extremely simple. Their energies are spent mainly in obtaining the necessaries of life directly from nature. As there is no trade, there are no luxuries. They form self-sustaining communities, with no intercourse with the outside. Means of transportation and communication are undeveloped, and travel and exploration find no encouragement. It is easy to understand that the study of such a society appeals to the children in these grades. Their problems and occupations are similar to those of the society which they are studying.

In the history work of the third grade we advance one step. From the simple, self-sustaining communities of the hunter, farmer, and shepherd, the child is led to consider a type of society where man no longer is entirely dependent upon nature through his own efforts, but where he obtains the necessaries of life, and very soon some of its luxuries, through the intercourse and interchange with other people.

Such a study involves, of course, such topics as: beginning of trade, of exploration, and of travel; development of means of transportation and of a diversity of arts; expansion of industrial, social, and political life. As concrete illustrations of such a society, some phases of Greek and Norse history have been selected for study in the third grade.

In this connection the children are brought face to face with geographical conditions, more definite and different from those that they have studied before. In both Greece and Scandinavia the country is mountainous, with a scarcity of soil. The coast is cut by deep inlets and is skirted by innumerable islands. The relation of these geographical facts to the life of the people is easily understood by the children. The study of this typical environment, with its results in industries and modes of life, furnishes material for the work in geography for the third grade.

No attempt has been made to have the children reason out in a logical order the various steps and stages which led from one type of society to another, from a farming to a trading community. Such a philosophical study would be far beyond the powers of comprehension and the interest of the children. The material has not been selected because it marks the beginning of proper historical study, nor because it emphasizes historical sequence. The aim has been rather to furnish the children with historical material that is simple, but not too simple; material which will bring into relief their own problems and ideals; material which will delight the child and at the same time stimulate to right action. It makes no difference to the child in the third grade whether the stories of heroism, of adventure, and of simple life are taken from the beginning of history or from the present, from this country or from foreign countries; only this is necessary: they must satisfy the child's cravings for life in the forms that he can recognize and act upon. For this purpose other chapters of history might have furnished suitable material. One reason, however, for selecting Greek and Norse life is, that the material is easily accessible and embodied in great literary masterpieces. In the sagas of the Norse and in Homer, we find a literature which adequately describes the age and which charms the children by the grandeur and simplicity of its style.

DETAILS OF OUTLINE

Geography of Scandinavia and of Greece.—The aim will be to bring the children into close, personal contact with mountain and coast scenery by the aid of pictures, stereopticon views, descriptions, sand-modeling, and reading. Such features as mountains, valleys, islands, fjords, bays, and harbors should become living realities to the children, as much so as features of their own home environment. These features in their climatic setting will be studied in relation to the life of the old Greeks and the Norse, in determining industries and modes of living. The study of the formation of such topographic forms as mountains and valleys—that is, physiographic processes—will not be touched upon in this grade.

Geographic conditions which encouraged early navigation and commerce: islands, harbors, scarcity of soil, etc.

Resulting industries and occupations.

Development of trade. How trade was carried on; means of transportation by land and by water. Colonization by the Greeks; discoveries and expansion of geographical knowledge.

The Vikings; where living; their houses, weapons, etc. Discovery of Iceland, Greenland, and America (Vinland) by the Norse. For comparison, stories will be told of modern explorers, as Nansen, Livingstone, Stanley; their equipment and aims as compared with those of the ancient explorers. The story of Columbus will be told as embodying the spirit and aims of exploration.

Study of Greek and Norse boats; comparison. Models of boats and vessels from the most primitive craft up to our modern vessel: the ancient vessel, the Norse boat, the galley, the boats of Columbus.

Collect pictures and have them mounted on charts so as to show the evolution of the boat. Discuss the slowness and inconvenience of these various crafts. How to find the location of a place on the ocean, by the stars, by the sun.

Social conditions of the people; home life, classes of people, games and sports, warfare and warlike conditions.

Standards of measurement, currency, use of metals. Ideals of the time and religious beliefs.

ILLUSTRATION OF METHOD

For the study of the Norsemen, the sagas of King Harold and Björn Farmand are told and read to the children. For the study of the Greek, the *Odyssey* in Palmer's translation, will be read and told. From the reading and discussion of these pieces of literature and of related stories, the children will work out the points enumerated above (see "Details of Outlines").

The play element has been emphasized strongly in this work. The children imagine themselves Norsemen and Greeks; dramatize the stories; play trader, viking captain, skald, and king.

When one group studying the Norsemen discussed how they best could tell their story to the Greek group, they planned the following scheme: to represent on a large sand-table the country surrounding a viking's home; to make trees with which to cover the mountain sides, and also animals, which live in the forest; to construct houses, ships, and men, and place these in the country made on the sand-pan. The children divided themselves into groups in order to work out this plan, each group having its chairman to direct the work and thereby give it unity. After this construction work was finished, the children embodied their knowledge of the life of a trader, in a story which they themselves composed. This story was absolutely original and composed by the group as a whole.

From the child's standpoint, a need arose for metal arrow-points, spear-points, battle-axes, money, weights, etc. This was the teacher's opportunity to have the children realize the difficulties which primitive man experienced in dealing with a new material, metal. In this as in all his constructive work, the child is confronted with his own particular problem and is left to use his own initiative in experimentation. After having discussed present uses of metals and where found, the children experimented in order to find out what metals they might use for their purposes. After trying to smelt different metals, the children decided upon lead and tin. The children plan and build small furnaces in which to smelt their metals, make molds, and carry on the whole process of molding in lead and tin.

A system of currency has been invented by the children, the value of a man (slave), an ox, and a sheep being represented by coins bearing the stamp of a man, or the head of an ox or a sheep.

When the children dramatize Greek or Norse life, they use, of course, the money, weights, scales, and armor which they themselves have made.

In studying how to furnish their Greek or Norse houses, or how to make their pottery, armor, and utensils, the children have tried to express Greek and Norse ideas and ideals in the designs. On the pottery, for instance, pictures from mythology appear—fierce heads of dragons on the Northmen's cups, while smiling suns and rippling waves adorn the Greek cups.

It is believed that the many-sidedness of the work here presented will call forth the varied powers in each child; that it will give wide scope for his imagination and for expression in simple but beautiful language as well as in the arts; that the child will find numberless opportunities to develop initiative through invention and constructive work; and that the social aspects of the subject-matter itself, and of the methods used in carrying it out, will train the child in social service.

HISTORY IN THE FOURTH GRADE

GERTRUDE VAN HOESEN

In the first three grades the children have studied some of the conditions that bring people together in a city. In the fourth grade we trace the growth and development of our own city. The study of local history gives a feeling of the reality of the past that can be secured in no other way, and the habit of thinking of actual relations gained by work upon the immediate environment can be carried over to the history of other regions. In local history we have all the necessary conditions for forming clear and definite images. Events have occurred in familiar places, and the children may visit historic sites. They may collect information from old inhabitants, and often study relics in the museums and art galleries. It is easy to trace the effects of the topography of the region upon its history.

The approach to the study of Chicago is through the consideration of the French explorers and the early settlers of the Northwest. This gives an opportunity to enlarge the ideas gained in the third grade in the study of the early Phœnicians, Greeks, Norsemen, and other explorers.

The work of the year is taken up as follows:

The early French explorers: their motives as compared with the explorers previously considered; religion, adventure, acquisition of territory; the industries naturally developed on the St. Lawrence River—fishing, fur-trading, trapping.

The story of Marquette and Joliet, with the geography necessary to understand the conditions. The children are told and read the story of the lives of these two men from childhood; their life on the St. Lawrence, then later in search of the Mississippi. Marquette's winter in Chicago in a rude hut is especially interesting, as it is thought that he was the first white man to live on the site of the present city. Joliet's report of their explorations in Canada.

The story of La Salle in his attempt to establish a chain of forts in the country south of the lakes, and to control the fur trade, gives the children a vivid picture of the character of men at that time. It is considered as follows: La Salle's youth and voyage to America; his grant of La Chine; Fort Frontenac; the building of the "Griffin" at Niagara; the trip to Lake Michigan; the probable fate of the vessel; the fort at St. Joseph; in the Illinois country; building of Fort Crèvecœur; the adventures of Tonty; the destruction of the fort; La Salle's trip down the Mississippi; his discovery of the mouth; building of Fort St. Louis; La Salle's return to France; his return to America via the Gulf of Mexico in order to found a colony; failure to find the mouth of the Mississippi; building of fort in Texas; his attempt to return to Fort St. Louis overland; assassination of La Salle; devotion of Tonty.

The development of trading-posts throughout the country claimed by France: stories of the life there; Kaskaskia; Detroit; Vincennes; Fort Dearborn.

The children next trace the evolution of the city from a fort and trading-post to the form which they see about them. In the study of Fort Dearborn there is the development of the trading-post, the building of the fort, the coming of pioneers, and then the growth of a village around the fort. This study includes the consideration of life without many of the conveniences of modern civilization. By means of stories the children learn of the need for paved streets, of the first road-making, the ferry across the river, the first bridges, the earliest houses, and the modes of traveling by land and water to reach the settlement.

Finally the children see in imagination the frontier village become a thriving city with a need for city government and for public works. It is with the functions of government that the child comes in contact, and it is these that he studies. In this discussion he is brought face to face with simple forms of civic organization, so that the mayor and the council become a more definite part of his social environment.

In the evolution of the city the problems especially considered are: the development of the streets from dirt roads to the asphalt boulevards; the water-supply from the spring and well to the water-system of the present; the illumination of the city from the torch to the electric lights; the drainage system, including sewerage and the Drainage Canal; the development of transportation from the canoe and prairie schooner to the almost perfectly equipped train and vessel system of today; the bridges across our river; the development of a simple form of government, with its mayor, police force, fire companies, life-saving station, and park system.

After this group of children finished the story of Fort Dearborn, they constructed a model quickly in clay. It is not worth the time for them to do it in more lasting material, as the problems in construction are the same that have been met often in previous grades.

During the spring term the work consists of the topics in civics above noted, with the exception of the water system which formed a part of the fall study. It was taken up as follows: discussion of ways of getting water, including our own water system. The children knew nothing about the water system of the city, except the fact that water may be obtained by turning the faucet, and that the pumping stations had something to do with it. We went to the pumping station nearest the school, each child carrying the following questions which were suggested by the class: How many men are employed at this station? How many hours does each man work daily? What are the different kinds of work necessary to run this station? What kind of fuel is used? How much is used in one day? What is the cost of the fuel per ton? What are the wages of the men? Each child was responsible for the answer to these questions and for knowing about the machinery. The following paper was written by one of the children before the discussion began:

"This station was built in 1875. There are 5 pumping stations in the city. This station is connected with the crib by two tunnels. One is 7 feet in diameter × 3¼ miles. The other is 5 feet × 3¼ miles. There are 6 engines. 80 lbs. of steam are required for each engine. 60,000,000 gal. of water are pumped each day. This station pumps the water used from 39th Street to the city limits and from State Street to the lake. There are 56 men working there. Each man works 8 hours a day. They use Illinois soft coal. 55 tons are used every day. The cost is $2.37 a ton."

This information was obtained individually during the visit to the pumping station. In the discussion we decided to find out, as far as possible, the cost of supporting it for one year. The following report is copied from one child's work:

$2.37	cost of one ton of coal.
55	
1185	
1185	
$130.35	cost of coal for one day
365	
65175	
78210	
39105	
$47,577.75	cost of coal for 1 year.
53,106.00	wages of men for 1 year
$100,683.75	coal and wages for 1 year

There is no more fascinating story in the history of our city than the building of the first crib and the first tunnel. The class considered the question of purifying the lake water, and performed experiments in filtering and distilling, proving the merits of each. The apparatus used in both cases was simple home-made apparatus, such as the children could individually construct.

HISTORY IN THE FIFTH GRADE

CARRIE M. PIERCE

Colonial history is chosen for the fifth grade because it illustrates the dependence of man upon a definite geographic region, and shows the development of a simple industrial life, with none of the complications growing out of our modern factory system. The pioneers were thrown back into primitive conditions, and had to win their own way in material things. Different groups of people were obliged to meet their necessities according to different conditions of soil and climate. These conditions are sufficiently simple for the children to understand. They give rise to problems which the children can make their own. In this study, as in that of primitive history in the primary grades, we trace man's conquest over nature, but at a more advanced stage of his progress. The energy, industry, and patience of the sturdy colonists make this a period especially useful in forming ideals of character.

In method we follow the story of individuals, because children's interests at this age are largely in persons, and in persons in action; but each story is so taught as to show the industrial conditions of a people, their household life, and the effects of their occupations upon social life and government.

Weaving is given especial prominence in the hand-work of this grade, and the children find in making their own designs a motive for the study of the household arts of colonial times. The children's own occupations, therefore, form, from one point of view, the center for their study. They also find in the continuation of work in civics begun in the fourth grade another center, this from the conditions of their environment. They learn the means of protection in our city afforded by our fire department, police, and board of health, and such other functions of our city government as they can comprehend. This is used as a basis for understanding the work of the colonial governments.

The work of the autumn quarter was the study of the Pilgrims. The children were asked where the people around them came from, and it was found that New England was an important source of the present population of Chicago. Many of the children had been to New England, and several had visited Plymouth itself and seen Plymouth Rock. After the story of the Pilgrims in England and Holland, and the coming of the "Mayflower," pictures of the country around Plymouth were shown, and the children discovered the reasons that led the Pilgrims to choose this place for their home. Plymouth harbor was modeled in sand, the "Mayflower" and Plymouth Rock were located, and the town was constructed on the sand-table, including Governor Bradford's house, the fort, the town brook, Leyden Street, Priscilla's home, and Burial Hill. The story continued with Governor Bradford's Journal as a basis, and the study of the first Thanksgiving feast gave especial interest to our own Thanksgiving Day celebration.

In the cooking lessons for the quarter, the children cooked dishes which the Pilgrims used. They ground corn in a stone mortar and cooked the meal. Baked beans, brown bread, hasty pudding, and cranberry jelly were also prepared. Just before the Thanksgiving recess the children prepared a luncheon to which they invited their parents. After the decision was made that the luncheon should be given, the question arose as to whether they should be Pilgrims entertaining their parents or Pilgrims entertaining Massasoit and his ninety braves. This involved much discussion, but finally the former idea prevailed. They dressed in Pilgrim costume, which led to a study of the dress of colonial times. The girls wore simple gowns of gray, with white kerchiefs and caps, while the boys wore full trousers, white collars and cuffs, and high colonial hats. Committees were chosen to arrange and lay the tables, to have charge of certain dishes, to receive and serve the guests, and later to clear the things away.

In former years we have had as a culmination of this study the dramatic representation of the first Thanksgiving Day. The scenes have represented the preparation for the feast, the welcoming of the Indian guests to the feast by the governor, a drill of the Pilgrim army under Miles Standish, contests between the Indians and the whites, and one dinner of the three days of feasting.

Our study of the New England home included the houses and their furniture, the fireplace with its furnishings, the ways of preparing and serving meals, the spinning, dyeing, and weaving, and the making of candles and soap. The children have dyed and woven yarn into small articles from their own designs, and they are now working upon a colonial rug.

The occupations into which the Pilgrims could enter necessitated some knowledge of geography. As a preparation for the study of the Massachusetts Bay Colony, New England as an upland region was described, and pictures of typical landscapes were shown. Then followed the story of Endicott and Winthrop. The story of the rapid development of the colony led to further study of geography. The reason for the variety of products on a New England farm were shown. The children reasoned that the lack of any staple product for export caused great need for manufactures, and that the excellent water power made these possible. They learned that there were great forests for building ships and fine harbors for commerce; that fishing gave impulse to trade, and a variety of occupations developed. We traced very simply the effect of this variety of occupations upon the social life of the people; the small farms; the villages and towns; the schools; the town-meeting.

The class studied Longfellow's "Courtship of Miles Standish." The greater part of the poem was read aloud by the teacher, the children working upon the parts in which they had most interest.

In the study of Virginia in the winter quarter we began with the plantation, contrasting it with a New England farm. After describing the large farm, with its great fields of tobacco, the many laborers, the mansion house and many other buildings, the river and the wharf, and the ship from England with its freight of manufactured articles, we inquired into the causes of the difference between the life here and the life in New England. The study of the Atlantic coastal plain gave us answers to our queries. Some experiments were tried in the making of such a plain. The children constructed a miniature plantation. We also studied the methods of cultivating tobacco, and compared the labor involved with that in growing corn. This gave some help in understanding the introduction of slave labor. The effects of slave labor were traced in the classes of society and the effects of the large plantation on the education of the people and their government.

The stories of the causes of the colony and the events connected with the history of its development were read with the class in connection with the other work.

For the spring quarter our work is the study of New York. The children read "Hans Brinker" to get a vivid picture of life in Holland, and the teacher told them the story of the siege of Leyden, which illustrates the character of the people. After they had read the story of Henry Hudson, maps were used to help them see the commercial importance of the location secured by the Dutch in America. As a gateway to the West, the Hudson River was of immediate value in their fur trade. Reading about the present commerce of the city also shows the importance of this location. (Carpenter's *Reader*). The Hudson may well be studied here as a type of a drowned river valley, and experiments may be made in the laboratory to show how such river valleys are formed.

The characteristics of the colony are studied and compared with those of New England and Virginia: occupations; classes of society; labor; household arts; education; government. A miniature city is being constructed on the sand-table, with houses built in clay. Painting and drawing of scenes in Old New York are also used.

Irving's "Rip Van Winkle," "Sleepy Hollow," and selections from the "Knickerbocker History," are read with the children to add to the interest in their study, and also for their literary value.

HISTORY IN THE SIXTH GRADE

ANNAS HIGGINS

In this grade colonial history is extended to include the study of French colonial life, and to compare the French and the English in the New World. To account for the contrast and emphasize the difference in their ideas of government, it is well to examine the conditions in Europe out of which they arose. The climax is the coming together of the French and the English in America, the failure of the French, and the success of the English in keeping possession of the continent, and the struggle of the Revolution.

The class has studied the French in America, something of the conditions at home that led to their coming, the great fishing industries that grew up in this country, and the beginning of the commercial intercourse between America and the mother-country through the fishing and fur trade.

The children have learned something of the physical geography of France, and of the industries springing from it; something, also, of the social and political life of the French people in the sixteenth, seventeenth, and eighteenth centuries; and they have touched all the conditions at home that influenced the new country. In this work they have brought in whatever the school or home library could contribute, as well as pictures which members of their families traveling abroad have collected. They have used their water-colors constantly, and have sought help from good pictures.

The work has called for a continual shifting of the center of study, from the new to the old country. In the New World they have followed Cartier in his voyages up the St. Lawrence, and his interesting contact with the Indians at Stadaconé and Hochelaga. Later they met Champlain, the young soldier full of the spirit of adventure, compelled to sit idle in Paris because the country was at peace for a few years. They have gone with him over the sea as a member of the band of traders led by De Monts, have recognized him as the real spirit of the band, have asked many times

COLONIAL HISTORY OF VIRGINIA—FIFTH GRADE

why he was not made *head* of the colony, and have rejoiced when some years later he really *leads* the expedition up the St. Lawrence.

They have worked on the Nova Scotia settlement with the keenest interest. They have found the characteristic of each man. They have admired Pontrincourt for his love of beauty, and have enjoyed the Bay and the "amphitheater of hills" with him. They have really a new friend in Lescarbot, and have found through him that an artist and student of the classics can bring real joy and life into a disheartened company of crude men such as were left to his care when the leaders of the colony went back to France and Champlain made one of his excursions to the south. They have loved old Memberton, the chief of the neighboring tribe, for his care of the French. They have been just as anxious as the old Indian that no enemy take them unawares. They questioned closely the right of the king to give the monopoly of the fur trade to De Monts, but severely, indeed, did they censure him when he revoked it, and caused the failure of the colony upon whose success they had determined. They stayed long enough with this colony after the revocation of its charter to see that it became the nucleus of French settlements along the Bay of Fundy.

The class followed the life of this colony in maps, pictures, and sand models. They built the habitations at St. Croix and Port Royal. They told many of the stories in their own way, and wrote several character sketches. One of the most interesting reproductions was the story of "L'Ordre de Bon Temps," or how they furnished their table with good things during the last winter at Port Royal.

They saw Champlain go back to France, but eagerly welcomed him when he came again to work out what he had planned five years before, to build a great fort and trading-post on the St. Lawrence. They studied the character of the country, the course of the river with him, and then built his habitation at the foot of the mountain. Here they studied the life of the trapper of whom Champlain, Père le Jeune, and others have left so many interesting sketches. They thus got a glimpse of the French colonial life; they saw the priest and the nun at their work of converting and training the Indian, and building churches and schools; they saw the trader bargaining with the Indians from the North at the midsummer fair at Quebec, Montreal, or Three Rivers; they had an opportunity of comparing the government with that of the English colonies which they had studied. Parkman, and Bourinot's *Canada* have been used. Bourinot, Pratt, and Baldwin's *Discovery of the Northwest* have been helpful with their pictures. The class has seen Champlain strengthen his friendship with the Algonquins, that he might go unmolested on his way to the "Western Sea," by joining with them against the Iroquois, and has foreseen the result of this policy. In this way the class has followed the whole life of Champlain to his death at Quebec. Some songs have been written by the children to express their feeling for the spirit of the French pioneers, each group setting its own words to music.

In geography they have worked on the St. Lawrence Basin, of which they are making a model, and have enjoyed comparing their own maps with those of Champlain, whose maps — half map and half picture — have interested them greatly.

They next saw the French spread out into the Mississippi Valley, following Marquette and Joliet, La Salle and Tonty, and the others who claimed the great region for France. They have read the stories of these men in the fourth grade, and this time read Parkman, and some of the original letters and diaries as given in *The Jesuit Relations,* and *Louisiana Historical Society Papers.* They have visited the Chicago Historical Society rooms.

Their knowledge of the trading interests of the French in the North enables them to appreciate the cause of the trouble between the French and English in the Ohio Valley, and its result — the French and Indian War. Their work on the building of Quebec by Champlain gives them an interest in it as the great stronghold during the war, whose fall meant victory for the English. Emphasis is placed on the result of the war, and its effect in history.

This takes them into the life of the English colonists, which they are following, laying stress upon the industrial development which leads to the Revolution. The social life is closely bound up with the industrial. They see the home, hand manufacture, and its growth into the factory system. Here the work which the class is doing in textiles gives zest to the history of manufacture in the colonies, and an appreciation of the advance in machinery. The newspapers of the times, some of which they have opportunity to consult, throw light upon the commercial life of the colonies, and upon the Navigation Acts. This work culminates in the Revolution, the Declaration of Independence, and the birth of the nation.

In civics, our plan involves the study of the work of the Civic Improvement Societies of Chicago and of the city of Athens as the type of a beautiful city. Some topics in Greek history seem especially desirable for work in this grade; for instance, the story of Marathon as a long-ago Bunker Hill, and the education and games of the Greeks. Two years ago the children made a series of tiles to illustrate Greek games. The story of the *Iliad* is used as a foundation for this study.

HISTORY IN THE SEVENTH GRADE

HARRY O. GILLETT

History considered as simply the record of past events has little place in the curriculum of the elementary school. Children live in the present, and, unless something is taken from the past to help the present, history is not fulfilling its whole function. It is not the study of men's conclusions about the meaning of the facts of history, or the "learning" of the moral lessons which men have gathered from history, that has any great influence on the children's lives. To be effective, the facts of history must become present, must be lived over again. The experiences of the former generation must become personal and real, the ways in which men have met difficulties and overcome obstacles must enter into present and vital thought, before their influence on the child can become very great. Nor is the temporary interest which accompanies the telling of dramatic incidents of history of much educative value in itself, but rather the reflection upon those incidents, and perhaps their immediate use in the solution of present problems. An idle interest, a desire for entertainment and the gratification of that desire by the teacher, may make the recitation seem successful, but the absence of constructive thinking means no mental advancement.

The child's study of history is not that of already formed institutions, but of the formation of institutions continually being molded and modified to suit existing conditions. To the child, history is dynamic. His view of history should be a picture of the ways in which men live together, not at present or in the past, but at any time. We can study life of the past better than life of the present, because the life around us is too complex. Institutions are being created and modified now just as much as in the past, but we are too near to them to see them as wholes. The elements tending to their formation are too numerous and too much entangled for us to see their relative value as elements. We cannot see the results of this and that plan. We cannot attain a height from which to get a bird's-eye view of the whole with the important elements standing out and the minor elements in the background. Time has made the picture more simple for us by making dim the unimportant, and we use that simplified picture to gain a knowledge of life, the interrelations of its parts, and how it meets conditions such as are with us today. We learn to see more clearly the meaning of the present as a part in the evolution of society.

"When history is conceived as dynamic, as moving, its economic and industrial aspects are emphasized. These are but technical terms which express the problem with which humanity is unceasingly engaged; how to live, how to master and use nature so as to make it tributary to the enrichment of human life."[1]

It is the economic side of American history which forms the basis of the work in the seventh-grade course in the University Elementary School. The work is introduced by a study of frontier conditions before the Revolution. The place of least stability, the place where tendencies are forming, the place where motives are most simple and where society is least hampered by tradition, is the frontier. There the elements of life are so simple and the heroic element, which is so strong in children of eleven and twelve years, is so pronounced that children can easily realize that life, and to a large extent re-live it. In a sense, history starts anew in the backwoods, and, from this as a starting-point, we may work out so far as is thought desirable the increasingly complex institutions up to the present time. On the frontier social and economic situations may be seen to grow into political problems, and the relations between them may be traced as they become more and more complex.

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[1] John Dewey, *Elementary School Record,* November, 1900.

This first picture of frontier conditions is broadened by a study of the life of Daniel Boone as a type of the early trans-Alleghany explorer and settler. The class is encouraged to read a good biography of Boone, such as that recently written by Thwaites. Parts of the narrative are read in class. The lesson assigned may be to choose such passages as best show some phase of the life of the times. In the study of the immigration which followed the early explorations of Kentucky, the opportunity is taken to show the geographical side of history in the difficulties which the travelers met in crossing the mountains, and the considerations of the topography, the soil, and the waterways which had to be taken into account in the choosing of a site for a home. As more and more people are compelled to live together in the frontier forts and stockades, the need of some form of government makes itself felt. The development of the idea of government in the Wautauga settlement is worked out. We find the source-books of history of special value in this kind of work, for a page from a diary or an extract from a letter written in the quaint style of the times adds very much to the reality of the picture. But the purpose of these readings is not entertainment; it is to help in the formation of a picture of the life of the times, and, to be of much value, such must be the purpose in the child's mind. Often the mental picture of the life of the times is to find expression in an original story based upon historical incidents of that time, and the necessity for a correct historical background gives the child a real purpose in reading from the source-books. The children also report going to their grandparents for information at first-hand about pioneer life. Even with children of this age (eleven and twelve) dramatization may play an important part in the teaching of history, if not indulged in too freely.

In the sixth grade the children study the Revolution; but in the seventh grade some time is given to the work of George Rogers Clark and his band of backwoods soldiers. While the political importance of Clark's work is not disregarded, the main purpose in our study is to show the spirit of the times, and at the cost of how much effort in the past we are now enjoying the natural advantages of the "Northwest Territory." If it seems that too much time is given to this part of our history, we must remember that the child grows slowly, and we cannot get the strong growth we wish by forcing. The wisdom of building a strong foundation of these fundamentals of history is seen later in the year.

The slow settlement of Ohio made possible by the Ordinance of 1787 is next worked out, with some attention given to the "land company" methods, and the constant trouble from the Indians. The great question of better means of transportation and communication was paramount, and sheds some light on the causes of the unsettled condition of the country in the early days of the republic. The demand of Kentucky and Ohio for the right to navigate the Mississippi, one of the great highways of the time, influenced the purchase of Louisiana. It is at about this time that we gather together what has been learned about transportation and the routes and conditions of travel from the seaboard to the interior, paying special attention again to the geographical factors involved. Some of the great questions of the day as to the duties of the national government in making internal improvements are discussed, and their bearing on present-day problems is noted. The culmination of the industrial and commercial situation in the War of 1812, the rise of a national feeling as the different sections became more in sympathy with each other as improved means of communication and transportation allowed better commercial relations to exist between them, the increase of canals, and the rise and growth of steamboats and steam railroads, form the next topics for study.

Considerable time is given to the study of the territorial expansion of the country, beginning with the Louisiana Purchase and the explorations of Lewis and Clark to determine the nature of the new possessions. It may be stated here that these explorations are taken up in some detail, as showing the geographical conditions of the country at that time, and what obstacles had to be met by the intending settler. The effect of improved transportation and communication upon the organization and development of Louisiana Territory forms an important topic.

The questions relating to the admission of Missouri to statehood crystallized the feeling about slavery, and show us something of the industrial and economic conditions in the South. The acquisition of Texas and the California region, and the influence of the discovery of gold in California, form the next topic. The determination of the northwest boundary line and the limits of the Oregon country rounded out our dominion in the West. The building of a transcontinental railroad and its influence upon the development of the Pacific coast region are then studied.

The industrial and social tension between the North and the South finally resulted in the Civil War, which was followed by a great industrial revolution, the effects of which we see daily.

The rest of the time (about eight weeks) is given to a topical study of the industrial development of the country, considered historically and often geographically, including such topics as the cotton industry, the factory system, mines and mining, the iron and steel industry, the activity of the general government in making internal improvements, the various national bureaus for the development of the country, local and national government, etc. This study is aided by excursions to great industrial plants and public buildings, such as the Illinois Steel Plant, the McCormick Harvester Works, the oil refineries at Whiting, a grain elevator, the city hall, and other public buildings in the city. The social and political changes due to changing economic conditions are followed as closely as the child shows he is capable of understanding them.

Expression in the history takes the form of written papers and oral reports, imaginative drawings and paintings, clay-modeling and work in textiles. Stories, reports, and papers are written regularly, and are examined both as to accuracy of fact and correctness of English. In one sense, the work in English grammar is based on these written papers.

The child's realization of industrial progress is aided by direct study of certain industries. In the spring quarter the growth of the textile industry is worked out, experimentally as far as possible, as the hand-work of the class. In the winter the study of electricity and the making of various pieces of electrical apparatus, as well as the experiments on the transmission of heat as applied to the cooking, increase the interest which the class has for all kinds of industrial progress.

In this course in American history the main purpose is to stimulate the children to gain a genuine, intelligent interest in the growth of their country—an interest which does not die at the close of the lesson or at the end of a series of lessons. In one sense, it is a course in sociology, for the facts are gathered to understand better how people and groups of people learn to live together, and how they react to their environment. It must not be assumed that facts are subordinated, for an accurate knowledge of facts must be acquired before conditions can be understood, and facts which are learned for a conscious purpose are more likely to be remembered than facts which are studied out of relation to each other, so far as the child is concerned, even though the immediate interest may be keen. Helping in the organization of the problem is the work of the teacher; it is by the working out of the problem that the child educates himself.

HISTORY IN THE EIGHTH GRADE

KATHARINE M. STILWELL

The topics chosen for the year's study are the European history immediately preceding the discovery of America, the growth of the knowledge of geography, feudalism and chivalry, the guild system of labor, and the arts and inventions of the Middle Ages. Other historic phases might very properly be selected. But it is believed that life in the Middle Ages is peculiarly fitting, furnishing, as it does, pictures of service and heroism which appeal strongly to pupils of the average age of this class.

The work centers about the widening of the world's horizon through the Renaissance. It interests the eighth-grade pupil because it is the background of the American history, already studied, and because of the relations that may be shown to the social and governmental conditions of the present. A study of the spirit of the arts of the Middle Ages helps the child to see some of the conditions that surround the modern laborer, and may show the need for a revival of handicraft, with its accompanying freedom in work that made possible the art of this period.

The children's own work in printing serves as a foundation for understanding the artistic value of the early work in this craft. It seems desirable that they should gain some conception of the art of book-making, including illumination and binding; but our conditions have not so far been such as to favor much practical work outside of printing. We have in former years found the press of very great social value to the school.

Drawing and painting and clay-modeling have been freely used as a means of expression of the life of the period.

The year began with a study of the period of discovery and the growth of geography. From a study of what the ancients knew, as shown by the maps of Herodotus, Pomponius Mela, and Ptolemy, the class became interested to know who the ancients were. The teacher sketched an outline of Greek history; the class read *The City of the Seven Hills,* and then studied about the ancient Germans. This included enough of their movements — the fall of the Western Empire, the growth of the church, the rise of the Franks, and the trouble with the Mohammedans — to explain the cause of the Crusades, and to account for the origin of feudal government. Following the Crusades, and the story of Venice, its location, its early history, and its rise to commercial importance, the class read *The Merchant of Venice* and witnessed Mansfield's presentation of the play. They then studied feudalism and chivalry according to the following outline:

1. *Growth of feudalism.*—The weakness of kings and the need of protection.

2. *The feudal estate.*—The location of the castle. Description of an eleventh-century castle, showing moat, palisades, drawbridges, portcullises, towers, donjons, etc. An attack and the means of defense. The lord and his vassals. The ceremony of homage.

3. *The life of the castle.*—The hall, the banquet, the wandering minstrel. Tapestry-making. Falconry. The chase. Chivalry. The page, the squire, the knight. The jurists.

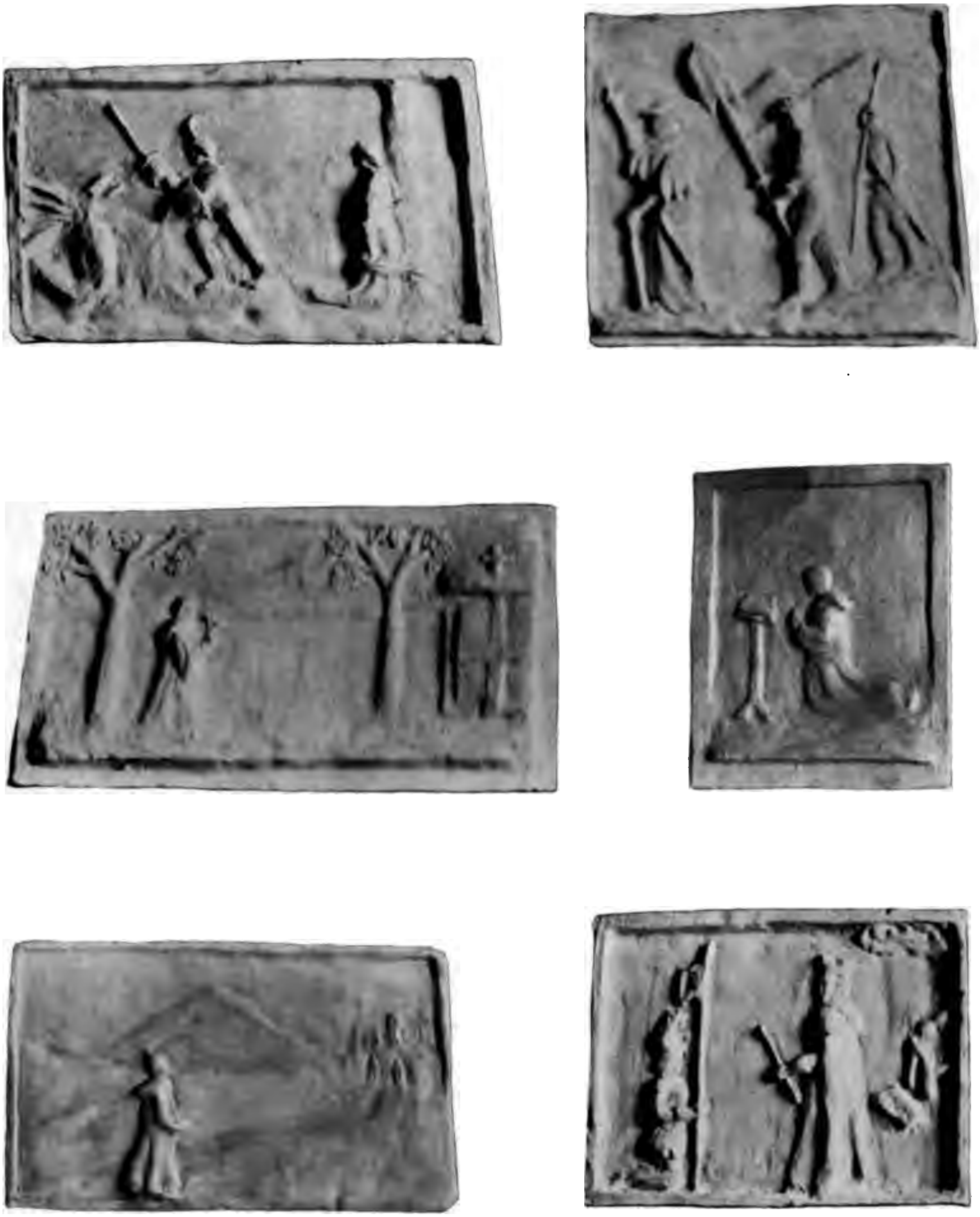
4. *The life of the village.*—Land-tenure. Plan of the village showing the manor lands—the domain, the pasture, and the fields. Relation of serf to lord. Method of cultivating land. The peasant's house, furniture, food, and clothing.

5. *The abbey as a fief.*—(Copy of the charter of Melrose Abbey.) What the life of the monastery was like. Its church, its cloisters, its work-shops. The wall, the moat, and the outlying fields. The dress and occupations of the monk.

The class acquired some knowledge of the topics outlined by reading the various school histories (Myers, Robinson, Harding), by examining pictures and collections of armor, and by reports from those members of the class who have visited Europe. In school they read selections from Tennyson—"Gareth and Lynette," "Sir Galahad," and "The Lady of Shalott"—and selections from Scott. At home they read *Ivanhoe, The Boys' King Arthur,* Pyle's *Story of King Arthur,* Bulfinch's *Age of Chivalry,* Young's *Little Duke,* and other books bearing on the topic.

The work of individual pupils made available to the class much of the necessary information. Different topics for investigation were assigned to the various pupils and reports presented in writing. Each was conscious that the class had need of his work, and hence each had a motive for writing.

The reviewing of books was introduced as an aid to making a list of books for supplementary reading. Each pupil wrote a review which was used to determine whether the book in question should be added to the list or not. This subject has presented many opportunities for expression in both painting and drawing.



TYPICAL SCENES IN THE MIDDLE AGES—EIGHTH GRADE

Many pictures were drawn to illustrate the costumes of the Middle Ages.

While studying the life in the castle the class examined the illuminated manuscripts in the Newberry Library and in the Art Institute. They read *Friar Jerome and His Beautiful Book,* and made some fairly successful attempts at illumination. An illuminated motto is the united work of several pupils, but each child has illuminated and framed a text for himself.

The class investigated modern methods of book-making, and visited the studio of Miss Stiles, who kindly showed them her work, and illustrated and explained to them the entire process of making a book by hand.

Finally an opportunity was given to express through modeling the results of this work. Each pupil attempted to show in clay his idea of the spirit of the period. The accompanying photographs show some of their efforts.

All the work done has been with constant reference to the present, and the comparisons already made have prepared the pupils for a better understanding of the broader and more vital topics which follow.

The general subject for the remainder of the year is the guild system of labor contrasted with our modern factory system — art. It is presented through the following topics:

1. *The towns of the Middle Ages.*— Their relations to feudalism. Growth of commerce and manufactures. Position of cities in the line of trade. Rise of free towns and cities. Privileges of townsmen — training for self-government.

2. *Life of the town.*— The walls and gates. Appearance of streets and houses. The churches. The town hall. Grouping of trades. Shops. Apprentices. Guilds. Trade laws. Stories of handicraftsmen.

3. *Study of Florence and Nuremberg* — as typical expressions of thirteenth-century art. The cathedrals of Europe as illustrating the growth of Gothic architecture.

4. *Results of the guild system of labor.*— How this compares with our factory system in (1) the desire to do good work; (2) the love of art; (3) the feeling of social responsibility.

SEED AND SOIL

AGNES W. O'BRIEN
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At many meetings of teachers called for the purpose of considering the teaching of English, much attention is given to the subject of literature. The interest of speakers and of those who take part in the discussions centers in the question: "What literary work shall we select for this or that age or grade?" One tells us that we should devote a large measure of time, even in the elementary schools, to the study of Shakespeare, of *Hamlet* and *Macbeth*, and to the study of the Greek classics; another, that we would better set aside Shakespeare in favor of Longfellow, Bryant, and Whittier; again, one advises us to discard Longfellow, Bryant, and Whittier, assuring us that there is little in those authors of value or interest to the child; that the time devoted to their works would be used more advantageously in the reading and study of stories depicting noble deeds and inculcating the belief that, in the long or the short, virtue is rewarded. Is the teacher who presents *Sir Launfal* to his eighth-grade class making an unwise selection? Or is his a most happy choice? Shall we eliminate the *Sir Roger de Coverley Papers* and Burke on *Conciliation* from the high-school curriculum, or shall we continue the teaching of them, content in the feeling of fruitful effort? The dictum of this speaker contrasts sharply with the dictums heard at other conferences. The enthusiastic teacher, passing through his Tennyson, or Dickens, or Bret Harte age, and seeing freedom for himself in the dignified, never-ending "Battle of the Literates"—renewed, fought out along different lines, and quite settled at every meeting—may elect to present to his class his beloved author who may not have appeared on the battlefields. A fortunate class! A teacher so inspired furnishes an open sesame to the heart, to the spirit of the master—the secret of the divine things that he possesses is more than likely to be betrayed to, and to become a divine heritage of, every child in the class. The teacher who desires to follow the mandates of his superiors, conscientiously, scrupulously, even to the letter, is bewildered, hampered, rendered inefficient.

So many considerations affect the choice of literature for school children as well as for the individual outside of school: the age, training, culture, temperament of the teacher; the spirit of the class, taken collectively and individually; its spiritual needs, particularly of its dominating members; the atmosphere, setting, background of the home and the school — these and many other influences bear on the choice. Differences of opinion as to the best choice of reading-matter are inevitable. One assumes a grave responsibility who says of literature that has held back the heavy bars of Time: "This shall be read, that shall not be read." The good resulting from the reading of worthy literature can never be entirely lost; as we sow, so shall we reap intellectually as morally. But are we not confining our attention too exclusively to the seed itself? Of itself the seed may be perfect, but if the soil is not scientifically, perseveringly, tenderly prepared for its reception, what avails the perfection?

The teacher who directs with wise suggestion the reading of a class of geniuses, of Franklins or Websters, may feel that he has done his full duty: a flash of the inner light illuminates the reader, the echo of a kindred soul is heard, understood, and the truth expressed by the writer is his. But the genius is rare. The thoughtful, earnest, industrious, responsible child is rare. The average class is made up of children who are curious, not inquiring; who are satisfied in the doing of the minimum of work required, fairly well; who are more or less indifferent to their own interests, and who are unwilling to believe that the superfluous labor counts for all that is best in life. Each class has its quota of so-called "bright" pupils, confident, touching ever so lightly the throbbing pulse of some master's offering, and then sweeping breezily on, scintillating with superficiality. For them, verily, is "truth hid in great depths" and "the way to seek it doth not appear," for they are blinded by their own brilliancy.

For several years past the reading-matter put into the hands of the Chicago public-school children from the first to the twelfth grades has been of good quality, notwithstanding that fact, the children are today afflicted with a poverty of language; their expression, oral and written, is inadequate and feeble. The poverty of language is accompanied by poverty of thought. We may fondly imagine that the boy who stands to recite, hesitates, jerks out a word or two, and then gazes into space, does so because he is bursting with ideas which his voice refuses to give out; so we sympathetically help him along, sometimes giving him the idea we think is his, and then helping him express it; we may even more fondly imagine that the girl who runs six sentences together does so because a world of ideas lies bare before her, and she is so intent on the living thoughts that she deigns not to consider capital or period; that the one who, after grandiloquently declaring that Goldsmith's diction in his "Deserted Village" is unsurpassed, marvelous, etc. (she is quite sure—hasn't she memorized the statement from the infallible "Introductory Remarks"?), and directly afterward characterizes Rome's Nero as an "awful mean king," and sums the character of her teasing playmate as an "awful mean boy"—we may deceive ourselves into thinking that they are expressing ideas; but they are merely saying or writing words. We were disappointed yesterday because the child's attempt to translate into his own diction a passage read and re-read in class was a miserable failure; we are tearful today because child after child, looking helplessly surprised when the stranger formed in his own way the question that we are sure the children could answer, failed in recitation; tomorrow, the office boy, the stenographer, the bookkeeper, drives his employer to despair, and we hear the groan of the business man. Yet for years the young people have consumed a great amount of time reading and re-reading masterly literature.

Are we not calling for expert workmanship before putting into the hands of the apprentice the tools by which he may equip himself for skilful work? Until we realize that English, not an art, not a science, must be presented scientifically to the students, the reading of the greatest literature will be more or less of a failure, because it will not perform its functions. It will fail to develop in the child the power to discriminate between the worthy and the unworthy; the power to form after examination an opinion of his own concerning a production; the power to understand its relations to other subjects in literature and life; the power to appreciate the record of the best that has been thought and felt by man; lastly, the power of expressing in simple, clear language his own ideas, if he is an originator; if not, to express and apply the ideas of others which he has learned and understands.

We give much time to written exercises in all subjects, believing that the child learns to write correctly by constant practice. True, if the practice is itself of the right kind. It may be wise to cut the time allotted to written work and devote a large part of it to oral exercise. A child benefits himself by written expression only when he writes of that in which he is interested; when he is so full of his subject that the writing is a delight; when his inner joy in the doing permeates and irradiates from every line. Then, as the artist sees to it that his masterpiece is framed and placed to advantage, so will the boy or girl put forth effort to set up in worthy dress the precious offspring of his heart and brain. He will seek the written symbols that express his ideas; he will begin to realize how insignificant is the relationship between the written and spoken signs of the same idea, and how necessary that he equip himself with the tools required in the doing of his work; he will unconsciously work for clearness, force, unity; for he knows so well what he is about that he is not willing to be misunderstood. Not the quantity of the writing, but the quality, the life, the spirit, the light that dominate it.

A ten- or twelve-minute composition, brimful of the writer's interest, thoughtfully written, is of more value to the student than are hours of indifferent, desultory writing on subjects in which he is but half instructed. Even in the matter of punctuation great help may be given by oral work; so great an assistance is the oral element in the presenting of this subject that I believe that, if so helped, by the time the child reaches eighth grade, punctuation may be handled as a familiar, long-used tool, easily, practically, effectively.

It would be well to eliminate from the spelling lists of all grades dozens of words that are practically never misspelled, and to set aside uncommon words and those outside the child's experience, until he is equipped with the list of about twelve hundred everyday words — the words that all should know, the words that are misspelled from first to twelfth grades. This list should be most carefully selected, discriminating as to the form of the word to be included. To illustrate, "begin" is rarely written incorrectly, "beginning" is commonly misspelled; "speech" and "speaking," "occur" and "occurred," give trouble. There is no reason why a normal child should not be prepared to use this list in writing with as little effort, and as correctly, as he uses them in speech.

If in the teaching of technical grammar in the seventh and eighth grades our purpose is to induce the child to compile a list of grammatical facts to enable him to answer what we call nice questions in grammar, particularly examination questions; or, if we think he will express himself correctly either in speech or writing because of his knowledge of such data, we are blundering. But if we teach him enough of grammatical terminology and classification to enable him to work out the logical relations of the various parts of a sentence or a group of sentences placed before him, that he may thereby interpret more clearly the exact meaning of the writer, provided that we do not trammel him by giving him the work as written exercise, we are serving the student well. We are putting into his hands one of the best possible means of developing his analytical power, without which he cannot understand the exact meaning of many of the ordinary communications of his fellow-men, not to speak of appreciating the great literature.

We conduct our reading lessons nowadays in the cold-blooded, intellectual manner, quite worthy of teachers of overcultured women. Why not allow the child to read Patrick Henry's "Address," Antony's "Oration," "Battle of Balaklava," as he feels them? To be sure, he will shout and rant more or less; to be sure, our nerves may be more or less racked; but the reader's joy will be exceeded only by that of his childish auditors. He may not know the exact meaning of some of the phrases that he shouts, but the spirit will not be missing — the spirit of Cæsar, or Rienzi, or Clay will go marching bravely on, thrilling speaker and listener. We have exaggerated the evils of this kind of work; we have a generation of youthful cynics who elevate their eyebrows and smile when some daring spirit attempts to read as he loves to. Why not devote considerable time in the middle elementary grades particularly to dramatizations?

Because I have been asked to speak particularly of the work in word-analysis as it is handled by the class now under my charge, I shall do no more than to mention the great value of the study of the thought-connectives of English speech; the wonderful power the student acquires from the careful study of synonyms and antonyms, through which he may reach the very heart of the language — the Anglo-Saxon element; and to that study which I place first, far above every other exercise that appears in the classroom — the intensive, daily study of short literary selections. None but those who have had the joyful experience of watching the tender young soul unfold itself to the light, awakened by the delicate touch of a master-spirit, can possibly realize what this work means to the child, morally as well as intellectually. Of this part of my daily work I speak with deep gratitude and reverence.

In September the class took note of about ten of the more common prefixes and a like number of suffixes. After they had learned the meanings of the prefixes and suffixes, one of the easier stems from the Latin, in the different forms in which it appears in English words, was given to the children. They were instructed in the building of words by the adjusting of stems and prefixes and suffixes. They were impressed with the facts that they could not build haphazard, and that it would be necessary to consult their dictionaries to verify the word and the various forms they desired to offer. At the end of the week the pupils had collected about one hundred and fifty words. The words were then written on the blackboards and carefully inspected by the entire class, and corrections of many kinds were made. The words were then copied into blank-books, from which they were analyzed and discussed at considerable length during the following week. The words were used in sentences, and care was taken to point out instances of words deviating from their literal meaning. In many cases the children gave reasons as to the changes, occasionally making an excellent point. They quickly acquired the "dictionary habit," and they watched each other so closely that he must needs be a daring child who attempted to guess his way into the work, the work, therefore, tending to make the student accurate as well as observant. A list of from twenty to forty of the more representative words from the stem, including those that were likely to be most useful to them as part of their vocabularies, was then printed on a large cardboard and placed before the class. There are so many words with each stem that it is quite impossible to go over all of them frequently. We have by means of the printed cards, the words for which the students themselves supply, managed to keep in touch with every stem studied during the year. It was necessary to devote more than a week to such stems as "graph" and "logos," so that we have been able to study about twenty stems during the present school year. The stress of the work is laid, not upon the building itself, though the pupils' interest in that phase of the work is quite absorbing, but rather upon the use of the words in sentences, their exact meaning, and their variations of meanings, and upon the comparing and contrasting of words by careful analysis. Each week we added to our lists of prefixes and suffixes, including many Greek prefixes. The children now have a ready, usable knowledge of the prefixes and suffixes of the language, and their vocabularies are greatly enriched. The children themselves realize the value of the work; it is ever a pleasure to them.

TEACHING AND STUDY

DR. THEODORE B. NOSS
Principal of the State Normal School, California, Pa.

In what order should these school exercises occur, and what should be the nature of each? Should the teacher be in fact what he is in name, a teacher of lessons, or merely a hearer of lessons learned from some other source? Should the textbook be in fact what it is in name, a text, or should it be the whole sermon? Should the textbook supplement the teacher, or the teacher the textbook? In short, should a new lesson be studied by the pupil before it is taught, or after? Common usage says, before. Does not good pedagogy say, after?

Of course, if the teacher does not know his subject and does not know how to teach, he should assign his lessons, in advance, in a good textbook, and stick close to the book — the closer the better. But it is unfortunate that the necessities of the poor teacher should set the pace and fix a habit for all teachers. The common practice of assigning advance lessons to be studied in a book and then recited to the teacher never sprang from the strength of teachers, but from their weakness. In Germany, for example, where for two or three generations teachers as a rule have been well prepared, no such custom is in vogue. Wherever the teaching art is seen at its best, in primary school or university, or any grade between, the teacher teaches the lessons; but wherever teaching becomes mechanized and the teacher a degenerate, he takes to the book as a duck to the water. He can't fly much, but he can swim all day. He can't teach well, but he can hear lessons "recited" and make timely suggestions and corrections.

"Hearing" lessons is hardly legitimate business for one who holds a license to teach. A license to hear would seem to be all that he is fairly entitled to. The very word "recite," when applied to such subjects as arithmetic, grammar, history, and the like, provokes the wrath of the "born" teacher, for the better the pupil recites, the less he knows. To recite gems of literature is a beautiful exercise, but to recite grammar and geography is abominable. If a pupil is caught at it, he should be rebuked for false pretense and contempt for his teacher.

Yet teachers may be found who do not frown upon, but encourage, such practices. A fourteen-year-old girl attending a city public school told me recently that she had memorized the first half of her textbook in United States history; that her teacher expected the class to recite the language of the book word for word; and that she had one day been told to sit down because she used the words "ships sailed" where the book had it "'ships coasted." No such unwarranted liberties with the book could be permitted.

This teacher may have been more conscientious and consistent than most teachers in the use of the textbook method for the preparation of lessons, but is not the method itself fundamentally wrong? The teacher's place is not at the rear, but in the front. If a horse is a thoroughbred and every way worthy of the honor, he ought to be in advance of the cart.

SOME OBJECTIONS TO THIS ORDER

Some plausible reasons have been found for having pupils study their lessons before the teacher teaches them.

1. It is claimed that the pupil gains more self-reliance by learning his lesson from a book without the help of the teacher. It is not made quite clear, however, what virtue the book possesses over a good teacher for inculcating the noble quality of self-reliance. Neither is it obvious that a pupil is more likely to be inspired with self-reliance by a teacher who depends upon the book than by one who exemplifies this virtue in his own teaching.

The pupil needs all the help he can get from both teacher and book, but he should have the teacher first. If he does not need the teacher at the point of greatest difficulty and danger, viz., in attacking the new lesson, why should he have him at all?

2. Objection is made that it takes too much time to have the class study the new lesson with the teacher, and that it is better

for the class to learn all they can from the book, and then let the teacher make an inventory of what each one has discovered, correct his errors and supply what is lacking.

This is so plausible in theory and so convenient in practice that no one is likely to object to it except a teacher. He objects rather strenuously, if he has an artistic temperament and is disposed to magnify his office. He thinks the element of inspiration is not sufficiently provided for in the pupil's self-study of the new lesson in a book. He is conceited enough to believe that he has a better chance than the book to arouse interest, clarify vision, and direct the efforts of the pupil. He argues that ordinary book-study lacks any good, definite aim, and encourages several bad aims, such as class standing, working for answers, for grades, etc. In contrast with this, he would make his method one of thought-study. He would have the lesson analyzed and digested, rather than memorized. He would not measure progress by pages, but rather by interests, clear knowledge, skill in doing things. He would teach every subject in its direct bearing on the life of the pupil, and would lay stress on all that affects personality and molds character. His method might not seem so speedy, but it is sure, and the results are lasting. I once conversed with an old man — nearly ninety years of age — Baron de Guimps, the last surviving pupil of Pestalozzi. In defending his great teacher against the charge, made by some of his contemporaries, that he was unsystematic and did not make sufficient use of repetition and review, he said: "What Pestalozzi taught once he never needed to repeat."

3. A further objection is made that if the teacher teaches the new lesson, there is nothing left for the pupil to do. But such is not the case. Teaching is not a mere recital of facts. That is more the nature of the book method. There is little choice between a teacher that tells everything and a book that does so. Teaching is a process that requires the active co-operation of both teacher and pupil.

Teaching is causing another to learn. The pupil co-works with the teacher in the discovery of truth. The teacher has really taught the lesson only when the pupil has learned it. After the lesson has been taught by the teacher, it is carefully reviewed in the book or books by the pupil, and is then reproduced in outline in an orderly way, in neat and correct written form, for the teacher. Much new matter may also be added in the way of illustrations and examples. In all this, however, there need be no groping or wasting of time in study hours.

4. Some teachers have a fear that the teaching of the advance lesson by the teacher makes learning too easy. If this fear is well grounded, we are on the verge of a great discovery—an easier method of learning. What man of practical turn of mind would not take his children, and go himself, to a teacher who would make it easier to learn? Who first conceived the idea that in education the shorter road must be avoided, and the longer one chosen, for the sake of mental discipline? And yet, what we contend for is not that learning should be made easy, but that it should be made fruitful. Make it harder, if you choose, but make it pay. Children like to work hard, if there is sufficient motive; but work without motive never makes a scholar or artist, only a slave.

No wise parent would exempt his son from effort, but to have his effort rewarded by learning twice or thrice as much would be an unmixed blessing. Anything that increases friction and causes delay and worry, in lesson preparation, is in itself a bane, not a blessing. There is so much to learn, and school life is so short that the easiest method of learning is quite hard enough. The old prejudice against short-cuts in education, such as the use of algebra to help the arithmetic, the educational use of pictures, etc., has given way somewhat, and there is a growing conviction that the simplest, clearest, and quickest method of teaching is the one to be chosen. Is it not curious that this should ever have been doubted?

THE TEACHING OF THE ADVANCE LESSON

It is here contended that the new lesson should regularly be taught in the classroom before it is assigned for study; that the new subject should first come to the mind of the pupil through the mind of the teacher; that the pupil's study of a lesson is made more intelligent, interesting, and fruitful by the preview which the teacher gives; and that nothing short of this can strictly be called teaching. Among the reasons that might be given for this claim are the following:

1. The pupil needs help in the study of the new lesson, if he ever needs it. The ability to learn, unaided, new lessons is not an innate nor an early endowment, but is, in fact, one of the latest and best products of school life. Doubtless many adult students in secondary schools waste half of their time in study hours because of groping and guessing. The mental habits acquired by such work and worry are the opposite of what we seek. The logical place and the psychological moment for the teaching of the new lesson are when the pupil first comes to it. The true teacher, like the good shepherd, goes before his flock. If there are dangers and difficulties, he must be the first to see them. If we hire a guide at all, we want him when we first go through the woods.

The task of reciting a lesson is an easy matter, if one knows the lesson. The teacher's aid could better be spared here than in the study of the lesson.

2. Lessons learned entirely from the book are apt to tax the memory unduly to the neglect of more important powers. In teaching new subject-matter the teacher can cultivate the habits of close attention, correct reasoning, and good expression. It is easier to teach a new lesson successfully than an old one.

If the lesson is alike new to all, the needs and interests of all are much the same, but such is not the case when pupils of varying abilities have studied the new lesson with various degrees of thoroughness. They are now unfitted rather than prepared to recite the lesson together. What is new to some is old to others. The recitation is more likely to beget indifference than interest. Little room is left for interests that are spontaneous and natural, interests that relate to the subject itself; and the exercise usually degenerates into a sort of cram and absorption of mind with artificial values.

It is an evidence of the robust health and sanity of the minds of children that so many of them survive the deadening processes of the so-called "recitation."

3. First impressions are most vivid and lasting. In the teaching of a lesson a teacher should not lose his case by a bad beginning. If he opens up the new subject himself, he can direct and train the minds of his pupils according to his will and skill, but to insure success all conditions should be favorable. What could be more harmful than to have a class roaming over the new lesson, in advance, like a herd of cattle turned into a new pasture field? Not only should the teacher not drive his class ahead of himself in this unskilful way, but he should try to prevent this anticipation of his work.

4. A teacher's work consists chiefly in teaching truth or correcting errors. It is mainly the former when he teaches each new lesson himself; it is mainly the latter when lessons are merely assigned in a book. Good teaching is not the art of correcting mistakes, but of preventing them. It is only the habit of accuracy that pupils need to form. Many teachers seem to become enamored of mistakes, and to live in an atmosphere of false syntax, false spelling, false pronunciation, false everything. They know all that the pupil should not know. The teacher's time should not be devoted to extricating the pupil from the bog of error; he should keep him from falling in. The slime of error cannot be so cleaned off that it does not leave some stain. The far-sighted teacher has about the same theory for mistakes that a farmer has for Canada thistles.

No wise teacher will make it easy for the pupil to miss the road. Very often, when the pupil makes mistakes, the teacher is to blame. There is some justification for a custom, said to exist in China, according to which, when a man commits a crime, his teacher is beheaded.

Teaching by preventing errors is more economical of time and effort, and more pedagogically sane, than the process of correcting mistakes. Mistakes are costly. A celebrated Greek music teacher charged double tuition to those who had taken lessons from another teacher — one-half for correcting mistakes. The maxim of Jean Paul Richter is a good one: "Look only on the best, and the good will soon appear."

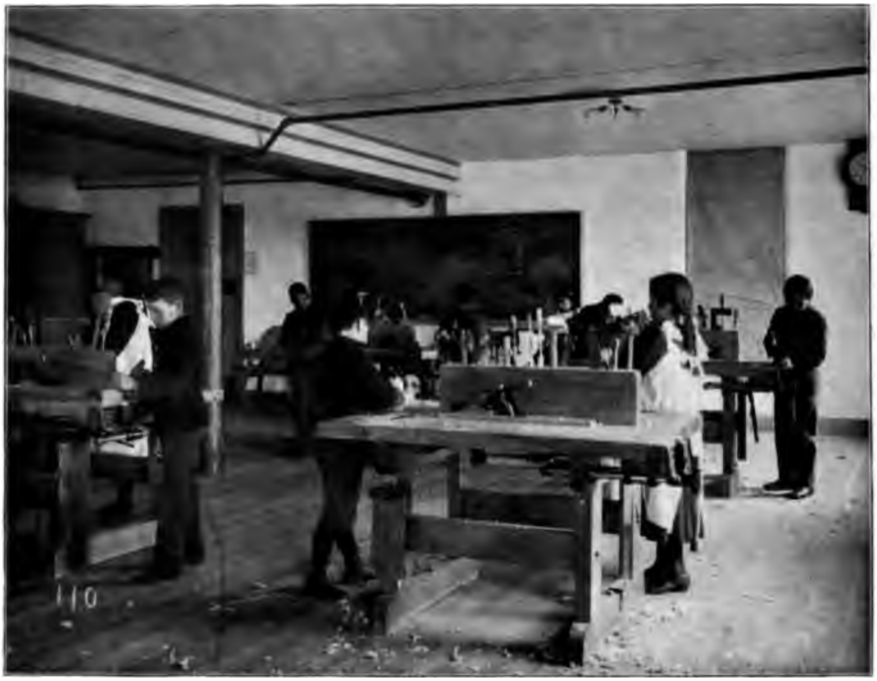
A gifted teacher is an artist as truly as is a painter or an orator. He also makes pictures that should be imperishable treasures on memory's walls. Anything that spoils his pictures is repugnant to him. Unguided study is sure to spoil them. The teacher who turns a class loose to roam unguided over a new lesson is like the thriftless farmer who cares not whether his seed wheat is pure or mixed. The engineers who have tunneled the Alps, and the architects who have built the great cathedrals, would all have failed if they had used the slovenly art of the teacher who devotes his time and skill to correcting errors instead of teaching truth. All high art, including teaching, loves precision. Mistakes are costly, and the teacher should plan to prevent them. "An ounce of prevention is worth a pound of cure."

5. The tendency in a textbook preparation of lessons is to narrow the scope of school work to a few subjects formally treated in the book, while things perhaps of greater importance to the pupil, to the home, and to the community are completely ignored. School should not be merely a knowledge shop where facts, mostly unrelated and uninteresting, are dispensed, but a place that adds to the enjoyments and increases the usefulness of all connected with the school. The pastimes of the home, conversation, story-telling, games, conundrums, etc., should not be so foreign to the routine of the school. Music, art, and current literature should have attention. The school should create interest in things worth knowing and impart skill in things worth doing. There is need of a larger use of knowledge and of less indiscriminate cramming, and for this the teacher's art is required. Most pupils need training in the art of seeing and doing the right things. It is harder for them to use their knowledge than to get it. Their time has been so occupied with a kind of sordid and selfish devouring of facts that their minds are closed to the best things in life. They need to realize that mere knowledge-stuffing is vulgar; that to have a great quantity of facts or money for which one has no use is not very laudable; and that, as some one has said, the maxim, "Learn all you can," is about as wise as "Eat all you can." It is the mental training which the pupil gets rather than the knowledge which he accumulates that is of greatest importance.

Real success depends chiefly on the method of study. This should emphasize quality rather than quantity. Unifying thoughts should be made prominent, minor matters secondary, and unrelating things, as a rule, omitted.

All this work of selection and relative stress should be turned over, not to the immature pupil, but to the skilful and experienced teacher. The textbook is all right in its place, and is indispensable, but it is no substitute for a good teacher. As a rule, textbooks should be much smaller in size, and teachers much larger in gifts and capacities. When we reach the golden age of pedagogy, the textbook will be a book of texts (outlines, problems, etc.), and the teacher will be a man or woman who teaches rather than hears lessons.

CARLISLE INDIAN SCHOOL



WOOD-WORKING

WORK IN THE CARLISLE INDIAN SCHOOL

ANNE H. STEWART
Teacher of Manual Training

Considering the purpose of the education of the Indian — which is to make him self-supporting as speedily as possible — the opportunities and environment at Carlisle seem favorable. Effort is made to arouse in the Indian youth interest and ambition in life, and the courage and ability to compete in civilized industries.

One half-day is spent in school, the other half in the various shops and workrooms. The boys learn the trades, and the girls are taught laundry work and sewing. Boys are given a choice of the trade they wish to learn, and are placed in the shops under competent instructors. The trades represented in the school are carpentry, wagonmaking, blacksmithing, harnessmaking, printing, tailoring, painting, tinsmithing, and shoemaking. The sewing for over nine hundred students is done by the girls. Beginners are placed in the darning class. From there they are advanced to the mending-room, where they are taught to do repairing and plain sewing. Each class does its own cutting. The dresses for the four hundred girls are made by the pupils in the dressmaking class. During the finishing year special training is given in drafting and fitting. It is observed that Indian girls are especially skilful with the needle, as were their mothers before them. The girls also receive instruction in cooking.

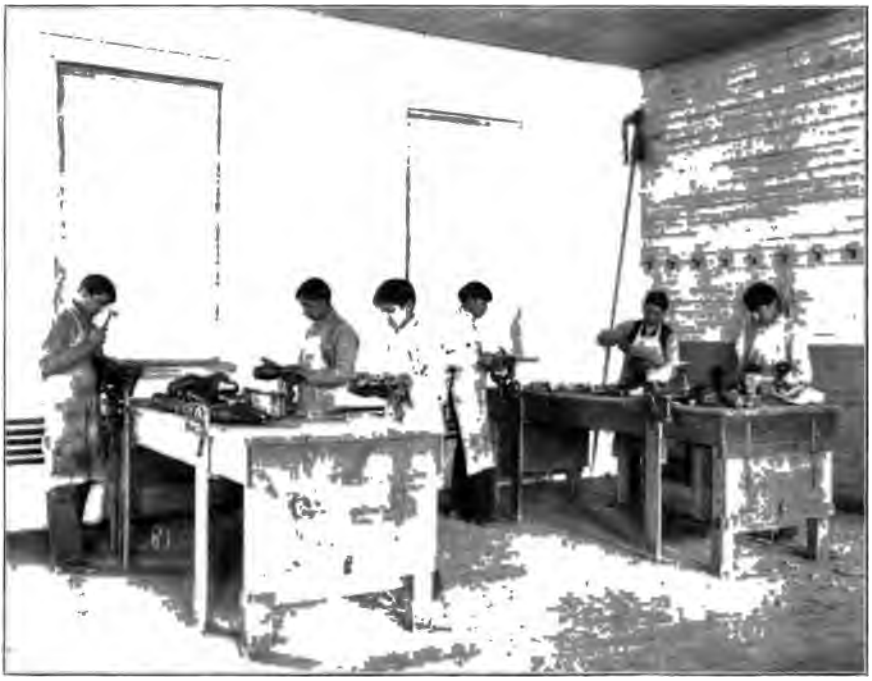
A system of placing pupils out in families was conceived by the founder, General R. H. Pratt, and was adopted from the beginning. The girls work in the house, the boys in the field and shop. People thus receiving pupils from Carlisle must sign an agreement to send them to school a stated number of days, and to see that their habits are what they should be. Students employed received such remuneration as their services warrant. Two outing agents are employed by the school — one for the girls, another for the boys. It is the duty of these agents to visit the children who are in the country, and to make report as to their progress and condition. The Indian youth, living thus in the home, learns English and civilized customs in a practical, natural way. This outing system has grown so that every summer seven or eight hundred pupils are sent where they gain a knowledge of how the white man lives and "earns his bread by the sweat of his brow." In the winter three or four hundred remain in the country and attend the public schools with white children. They must save one-half their earnings, so that many of them have a neat little sum to their credit when they return home.

The Indian child comes with his native inheritance—patience in execution, keenness of eye, and skill of finger. Results of the hand training of his ancestors are evident. Who can look upon the fine, intricate, and historic designs woven by the old Indian without a live appreciation of his thought, his skill, and his perseverance?

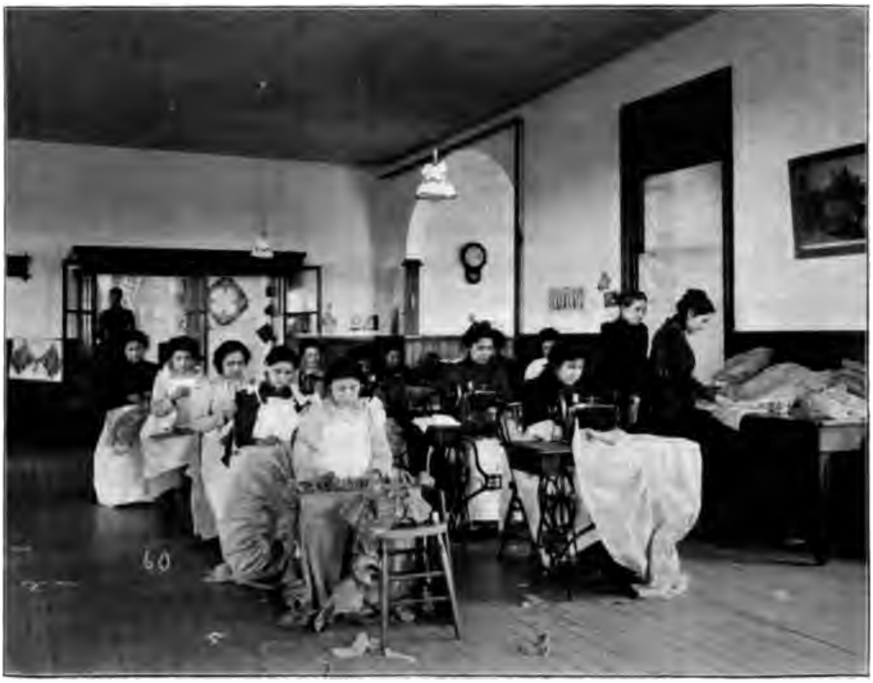
To one unfamiliar with conditions the average age of the children would seem high for their grade. At Carlisle there are but few under twelve years of age. The low-grade adults and the small children are taught separately through four grades. Boys under sixteen and the youngest girls receive two lessons each week in sloyd.

Although the work corresponds to that given in the public schools, conditions at Carlisle are unusual, and methods are adopted which seem best to meet the need. Sloyd work appeals very strongly to Indian children. First-grade pupils who can scarcely speak a word of English find it a means of expression; and, indeed, it seems that it is right here that the greatest growth and development resulting from manual training are apparent.

On account of work details, the sloyd classes are for the most part ungraded. The instruction must be entirely individual. The Indians are not nervous, nor are they impatient. Thus their temperament contributes to fineness of technique. This is also observed in the basketry, loom-weaving, and other hand-work given the younger classes. All this manual training is found to be of great value with these children. It not only awakens their



LEARNING TO MAKE SHOES



DRESS-MAKING ROOM

mental powers and sustains interest, but is an excellent factor in discipline.

In drawing they excel in nature work and design. Many show a fineness of feeling and appreciation of beauty of form, though their rendering of it is often mechanical in execution. They are painstaking students, anxious to please, and not in the least afraid to undertake a study or design for fear the results will be inadequate. In consequence, the results are often surprisingly good.

THE COLONEL FRANCIS W. PARKER MEMORIAL FUND

A committee, representing various educational interests, has been appointed to take steps toward raising funds for the purpose of securing a life-size bronze statue of Colonel Parker. It is proposed to place this in the new Chicago Normal School building, which is located at Normal Park.

Colonel Parker was the friend of the children as well as of the teachers, and, realizing this, the committee has issued a circular letter asking the teachers everywhere, who are interested, to take the matter up with their pupils. Thousands of teachers, the country over, can give good reasons from their own experience why this memorial is a fitting one, and many of these, where practicable, will be glad to interest their children in making some contribution toward the memorial fund. The committee feels that small contributions from school children representing the widespread influence of Colonel Parker's work will be peculiarly appropriate. The following is the text of the committee's letter and the names of the committee:

The Board of Education of the city of Chicago has erected a splendid building to be devoted to the training of teachers. This structure, a cut of which appears on the first page of this letter, stands on the spot once occupied by the Cook County Normal School. It was here that Colonel Francis W. Parker labored so earnestly for eighteen years for the welfare of children throughout the country by seeking to instruct and inspire those who were to become their teachers.

The Board of Education has thought it fitting to honor the memory of Colonel Parker by setting apart a place for a memorial in the rotunda of the new building. A Memorial Committee, composed of representatives of various organizations of which Colonel Parker was formerly a member, has been formed for the purpose of raising a memorial fund to the end that there may be erected in the place provided a life-size bronze statue of the great leader.

Since the influence of Francis W. Parker is not confined to any one section, nor indeed, to our country alone, it is believed that an opportunity to contribute to the memorial fund should be extended to teachers, pupils, and friends of education throughout the land. It is an omen of happy import that

Dr. J. B. Zubiaur, the Horace Mann of South America, visited the school a few weeks after Colonel Parker passed away, and, anticipating this movement, left a contribution of ten dollars.

If this work undertaken by the Francis W. Parker Memorial Fund Committee meets with your approval, it is respectfully suggested that you fill out the inclosed blank and mail the same with remittance in inclosed envelope at your earliest convenience.

THE COLONEL FRANCIS W. PARKER MEMORIAL FUND COMMITTEE

Orville T. Bright, Chairman.
6515 Harvard Avenue, Chicago, Illinois.

Cook County Normal School Alumni Association
Helen M. Hefferan
Sarah E. Griswold
George W. Fitz

Chicago Normal School
Melva Latham

Francis W. Parker School
Flora J. Cook

Chicago Principals' Association
Orville T. Bright
James E. Armstrong
William M. Giffin
Florence Holbrook
Kate Starr Kellogg
Albert G. Lane
Fulton B. Ormsby

School of Education, University of Chicago
Wilbur S. Jackman

Northern Illinois Teachers' Association
Alfred Bayliss
John W. Cook
W. H. Hatch

EDITORIAL NOTES

An Organization Versus An Aggregation

A social institution is an organism, and not simply "a sum of particulars;" hence, there are some difficulties that arise at present under the head of school government. We are still applying means and methods in the effort to develop a social organization which are appropriate only in the formation of a body having the agglutinant characteristics of an aggregation. Few people realize that the transformation of a school of the old type into a social body involves anything more serious than a mere change of name; whereas, it actually means a revolution.

Drill-Work Anti-Social

The dead and persistent drill upon the three R's, backed up by the birch, by bribes, by promises of promotion, by threats, and by cajolery, has but a feeble socializing power. It is, on the contrary, extremely individualistic in its influence through the unwholesome rivalry which it always promotes. There can be no true social life unless there is a problem of common moment which must be solved by all. Under the usual school régime few such problems are presented, and as a result, so far as what is considered actual school work is concerned, each pupil sinks back more and more into himself, and, to a corresponding degree, he inclines to become suspicious of his fellows and, therefore, distinctly anti-social.

Social Organization Through Play

All schools, however, have always had some social life of a more or less organized character. In the plays and games outside of school hours; in the stolen whispers of the study and recitation periods; in the clandestine schemes laid for the discomfiture of the teacher; in the literary societies, and in many other ways through the exercise of their social instincts, the pupils have managed to make their school days tolerable for themselves and, to a like extent, often intolerable for the teacher. But these aspects of school life have been, and still are, considered as diversions, as incidents and somewhat as detriments to what is called, in school parlance, the "regular work." It is largely due to this fact that in most schools the socializing process as yet remains inchoate.

Social Organization Not Through Play Alone

There is a misconception, almost universal, concerning the organizing center of the school as a social body. Recognizing that in the past the chief organizing influence has come through the exercise of the play instinct, the unguarded inference is that it is now proposed to socialize the school through play alone; or, what comes to the same thing, by the introduction of work which shall be turned into play! It is through this perverted idea that the New Education stands charged with triviality in its methods and with a disregard for that robust discipline which comes through sturdy and purposeful work. Nothing could be farther from the truth. Students in the philosophy of education are slowly coming to understand that the spelling-book, as such: that the endless repetitions which usually accompany "formal number;" that the struggle with words merely for the sake of a vocabulary in reading; that the wrestle with technical grammar as an introduction to the study of language — that all these and other subjects of like kind, as they generally appear in the schools, are essentially unsocial in their influence. Such students believe that herein lies the greatest obstacle to that reform which seeks to socialize the schools. If this so-called work is to be removed from its present dominating position in the curriculum, it is as yet inconceivable to most people how there can be anything to take its place except play. It is only too true that in many schools where the old technical drills have been discarded, in a measure, the teachers have been unable to find anything worthy to take their place, and there at once develops a tendency toward inferior social types of organization. These lower social units taking root readily in a school where many of the old arbitrary means of control have been abandoned, inevitably become immediately inimical to the broader interests of the school as a whole.

An interesting, but exceedingly troublesome illustration of this is found in the recent rapid development of fraternities and sororities in the high schools. These organizations have acquired a strength and significance that seriously threaten, in different ways, the welfare of the schools. Upon this point perhaps a large majority of teachers are agreed; and yet it will tax the wisest counselor of youth to the end of his wits to present the cause of the school against that of the fraternity with a power that will convince.

The Genesis of Fraternities

There can be no doubt that this phase of social development is a rank, wild growth that has almost taken possession of the schools in this transition stage which connects the old anti-social period with the new life that is to be socialized through common effort in legitimate work. The fraternity idea strikes at the root of social life, as it is embodied in democracy's ideal, and it is of sufficient importance, therefore, to demand the most careful attention.

There is no need to dwell upon certain features of fraternities which are so obviously pernicious as to require no special presentation. One of these is the so-called chapter house, that often consists of a small cottage in which are sequestered during their hours of leisure from six to a dozen or more young men. While most parents and teachers are keenly alert to the dangers of such association through the development of certain physical and moral vices which are apt to beset young people of this age, in many cases they seem to be stone-blind to the greater danger that lies in the development of false ideas of life.

The Chapter House

In making inquiry, therefore, into the value of fraternity life among the children, it is necessary to test it entirely in accordance with its power to contribute to the welfare of the school as a social whole. The school, being a social organization, has a right to demand that every individual contribute the best that is in him to the good of all. In making this contribution, it is perfectly natural that much should be done through groups around certain centers that have definite

Group Influence

ideals. The groups being formed, the school, however, still has the right to exact the same things from them that it does from the individuals — namely, the best that they can contribute to the general social welfare. If, now, the fraternities and sororities are so contributing, if they are wielding an influence that is tending to blend all the diverse interests of the school toward one end, the social uplift of all, how does it happen that in schools where these societies exist the classrooms and corridors are thronged with those who are shivering under the frost of ostracism? A true social system is satisfied with nothing short of the best that is in every individual that belongs to it. But here is a system, masquerading as social, which, at the best, is indifferent to the good influences which great numbers of the pupils might exert, and, at the worst, it deliberately sets about preventing the individual from giving his best to the school. Whether in the fraternity or out of it, there is no difference in principle; certain well-defined lines are established beyond which the members may not go, and over which the non-member may not pass. The good that the fraternity seeks is the good of the small coterie composing it — it is distinctly selfish and narrow. To assume anything else is ridiculous; for if it were really the good of the whole, it could not and would not confine its membership to a few. It is essentially aristocratic, and it must, therefore, come into direct conflict, as it does at every point, with the proper organization of the school. which is essentially democratic.

The point to be clearly emphasized is that through the fraternities and sororities the group influence is wrongly directed. The individuals composing the societies possess many elements of leadership, as well as social and other qualities that are the life of the school, and it is most desirable to cultivate them. These young people are at an age when they are susceptible to good impulses; they want to do the "square thing" and to do it in a large way. Nothing could more clearly testify to the utter mismanagement of these pupils by both teachers and parents than the fact that we find them given over to the selfishness of the fraternity idea. This is because there is precious little connection between the subject-matter of the average high-school curriculum and the things about which the pupils at this stage of life actually are thinking. In matters of daily living, those things of the most intense present interest and importance to them, they are left generally to shift for themselves. They naturally flounder, make mistakes, form bad habits, and often generate low and wrong ideals that distort their vision and enormously diminish their happiness and usefulness in after-life.

It is the period in education which should be devoted concretely to the training for citizenship through the development of true democratic ideals. This should not be attempted merely through a few set lessons in civics, but through a systematic social organization of the school as a whole. The social life of the children, involving, through both work and play, all their community relationships to each other, should be the center and the controlling influence in the school work. In such an organization, naturally, there would be groups; but the group influence, instead of being centered within its own narrow limits, would be diffused throughout the entire school. This would put the school in line with democracy, which is distinguished by a true exaltation of the individual—of every individual. No school can afford to exist a day without the best that every pupil can contribute to the life of all. The pupils can be thoroughly imbued with the principles of democracy only by actually living them out during this most impressionable period of their lives. Many people feel that the various class distinctions developed in fraternity life must be natural. Let no one be so deceived. The distinctions made are in the main the result of a worship of false standards of life; they are the result of wrong ideals, and the effect is as sinister and pernicious upon the members as it is humiliating and embittering upon those who are not.

False Reasoning

It is impossible to estimate the wrong inflicted upon those who are not members by the school that permits fraternities. Pupils frequently appeal to their teachers or principal for the reason that they are not allowed to join them. The stock reply is full of sophistry, obvious to the dullest pupil. It generally takes the form: "You are now face to face with one of the conditions of life. You cannot always expect to 'belong.' You are bound to be 'left out' of some things. This is one of them. You must learn to stand alone.". The teacher may mean well, but, in view of what the pupil has a right to expect and demand of the school, such an answer is little less than brutal. It is the ages-old answer of the aristocrat to the common people, of the king to the serf. It in no way resembles the frank intercourse between man and man in the organization of a democracy. Such a teacher fails utterly to grasp the situation, and he does not give the correct reply. The case is not parallel with the conditions of after-life, and if it were, it is this "condition of life" that a school fitting its pupils for democracy must train against. The teacher replying thus disregards the rights of the individual, and he salaams and kowtows to the self-appointed aristocracy of his school. The boy has rights. The school advertises open doors and all privileges to those who are well behaved and who can pay the price. Under these conditions the boy enters. He is well-intentioned, and instinctively he feels that he owes his best to the school. He knows he can realize this most fully through association with his fellows. At this point he finds himself barred by fraternity lines; moreover, he finds a school posing under the social theory, yet actually sanctioning an internal organization that deliberately sets itself to humiliate and handicap him as an individual. He finds the school does not live up to what it advertises, and that it has sold him a gold brick. If such a pupil were to go into court, it seems as if he should stand a chance of getting an order compelling the school to lift the boycott. It is the function of the school, if it be the true cradle of democracy, to remove such conditions and to train its pupils in rational and humane methods of so doing.

The genius of the American parent is against the spirit of the fraternity. When one contrasts the effect upon the character of his child that a school will have which is broken up into fraternity factions, with the effect which a training for a similar length of time would have in an institution founded upon the principles that govern Hull-House, or which dominated the Cook County Normal School in Colonel Parker's time, there is simply but one conclusion possible. The one trains the pupils at this most teachable period of their lives in all the old social prejudices and traditions that the race is doing its best to slough off; the other broadens and deepens the sympathies; it schools the older in the care of the younger, and it teaches the younger to trust the older. It trains the strong to look after the weak, that the strength of the former may be more surely conserved. In fine, it educates into that broad citizenship which, while recognizing the inestimable value of individual integrity, constitutes the true democratic state.

The Real Solution

Schools can and no doubt will, in time, purge themselves of fraternities by arbitrary means. But the spirit that begot them will still remain and, until the school distinctly improves the quality of its work, it will walk the earth unsatisfied. The radical cure lies deep in the fundamental constitution of the school and in the motives that control its life. We can socialize the schools only through the performance of actual social service, and up to date practically no means of social service in the "regular work" of the school has been provided. Fraternities flourish where the pupils are idle; they represent the feeblest and most primitive effort on the part of the school to organize itself socially; they are natural because there is no larger demand made for the exercise of the social qualities. When the home and school successfully enlist these qualities in the broader interests of both, the fraternity idea will be abandoned in the course of a natural evolution.

W. S. J.

LITERARY NOTES.

Hand Work for Kindergartens and Primary Schools, by Jane L. Hoxie and illustrated by Leila Maude Wilhelm (Milton Bradley Co.), gives directions for some selected lessons in domestic activities, wood-work, raffia, drawing, and blue print.

THE convenient popular edition of the Lewis and Clark Journals, issued by A. S. Barnes & Co. in their successful "Trail-Makers" series, has been recommended by the Reading Circle Board of Nebraska for the use of teachers throughout the state.

IN *The House in the Woods,* by Arthur Henry, just published by A. S. Barnes & Co., it is understood that Mr. Henry has held the mirror up, not only to nature, but to his neighbors, to whom the book is dedicated, and that they have each had an opportunity of criticizing the manuscript.

Practical and Artistic Basketry, by Laura Rollins Tinsley (E. L. Kellogg & Co.), will be found definitely useful to teachers. Material and processes are clearly described and fully illustrated. The book specially recommends itself because every suggestion offered has been tested through the personal experience of the writer.

A. S. BARNES & Co. publish this week Dr. Emelyn L. Coolidge's new book, *The Mother's Manual.* Dr. Coolidge is well known as a visiting physician of the Out Patient Department of the Babies' Hospital, and her book, which embodies the result of years of study and practice, forms the second volume of "The Woman's Home Library."

THE *Frozen North* is an account of the numerous voyages of exploration in the Arctic regions that were made during the nineteenth century, prepared by Miss Edith Horton. The book will serve an excellent purpose as an aid in the study of geography and as an attractive supplementary reader. It is to appear in the early spring. The publishers are D. C. Heath & Co., Boston.

A. S. BARNES & Co. are shortly to publish a new edition of *The Battles of the American Revolution,* by Henry B. Carrington, brevet brigadier general United States Army. This is in response to the demand for an edition at a popular price. The eight topographical maps which were made for it are of exceptional interest and value, and have been indorsed by the War Department. The price of the new edition will be $3 *net.*

IN his biography of *Whistler as I Knew Him,* just published by The Macmillan Co., Mr. Mortimer Menpes tells a curious story of the famous artist. At the little breakfasts which he used to give in Paris and in London he was sometimes forced to be very economical. "He often said to me: 'Look here, Menpes, I wish you would go and buy a bottle of eighteen-penny white wine from the Victorian Wine Co. We will decant it carefully, and, what with my brilliant conversation and the refined atmosphere of the studio, these men will never know whether it is good or bad. Somehow men understand red wine. If you give them a cheap vintage, they recognize vinegar; but with the qualities of white wine they are not so familiar.' So it always proved to be. This eighteen-penny white wine was produced at the famous Whistler breakfasts, where it was pronounced to be perfect. 'A very sound wine, very sound indeed,' I have heard men say as they held it up to the light, handling it carefully as though it were priceless — in exactly the same way I have seen them caress a blue-and-white plate. I have heard intelligent men dilate for hours upon the beauty and rarity of certain porcelain which I myself have seen Whistler buy at a cheap shop round the corner, or which has been presented at our doors in company with a pound of oriental tea."

Overton and Hill's Nature Study. By FRANK OVERTON, A.M., M.D., assisted by MARY E. HILL, Instructor in Science and Nature Study in the Goodyear Burlingame School, Syracuse, N. Y. New York: American Book Co. Cloth, 12mo, illustrated, pp. 142. $0.40.

This book furnishes a year's work for pupils from eight to eleven years old. The subjects for study are those most familiar to children, such as the fly, the tadpole, frost, the pine tree, golden rod, the bird's nest, etc. The lessons are arranged in the order of the seasons, and throw light on the unfamiliar sides of these familiar things. They are correlated with work in drawing and composition-writing, and teach the pupil not only to observe closely, but to realize the meaning of what he has observed, and to describe it both pictorially and verbally. The book is profusely illustrated, largely from photographs taken by the author. The plan is simple and the method supplies interesting work for young pupils, and affords a good basis for further and more advanced study.

Spencers' Practical Writing. By PLATT R. SPENCER'S SONS. New Yo[illegible] American Book Co. Six Books, per dozen, $0.60.

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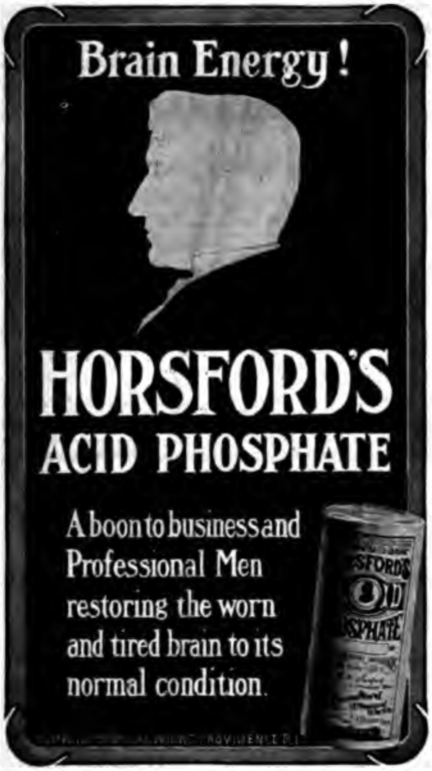

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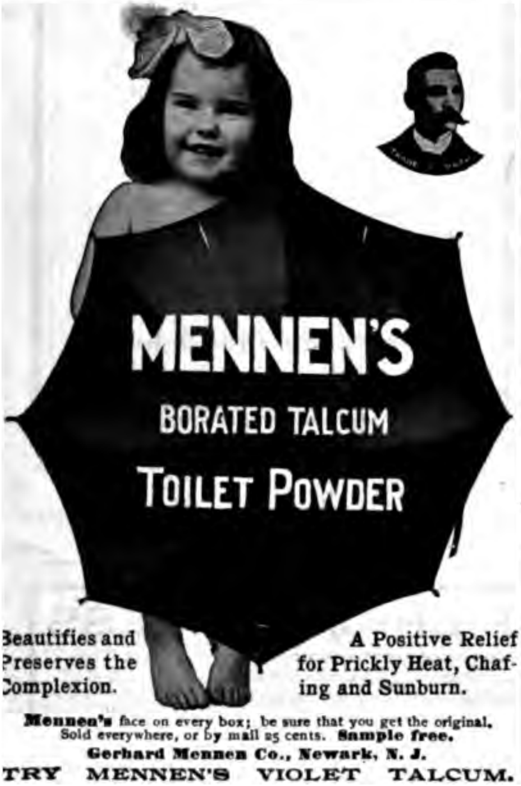

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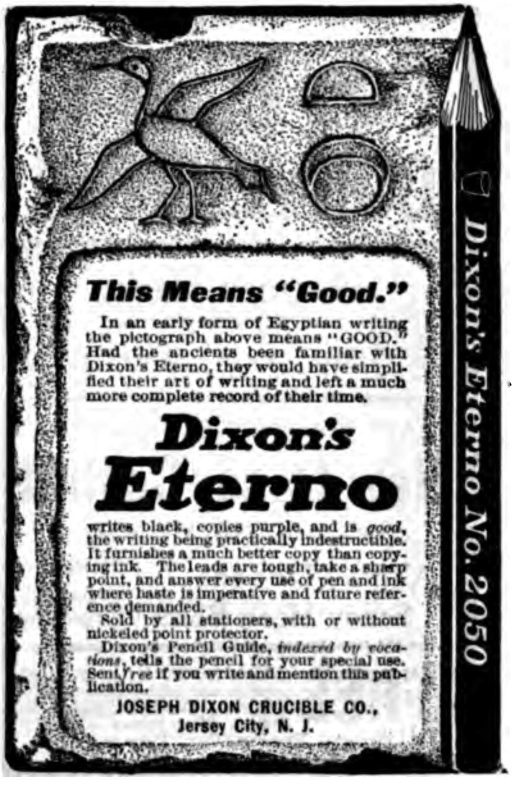

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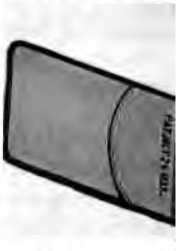

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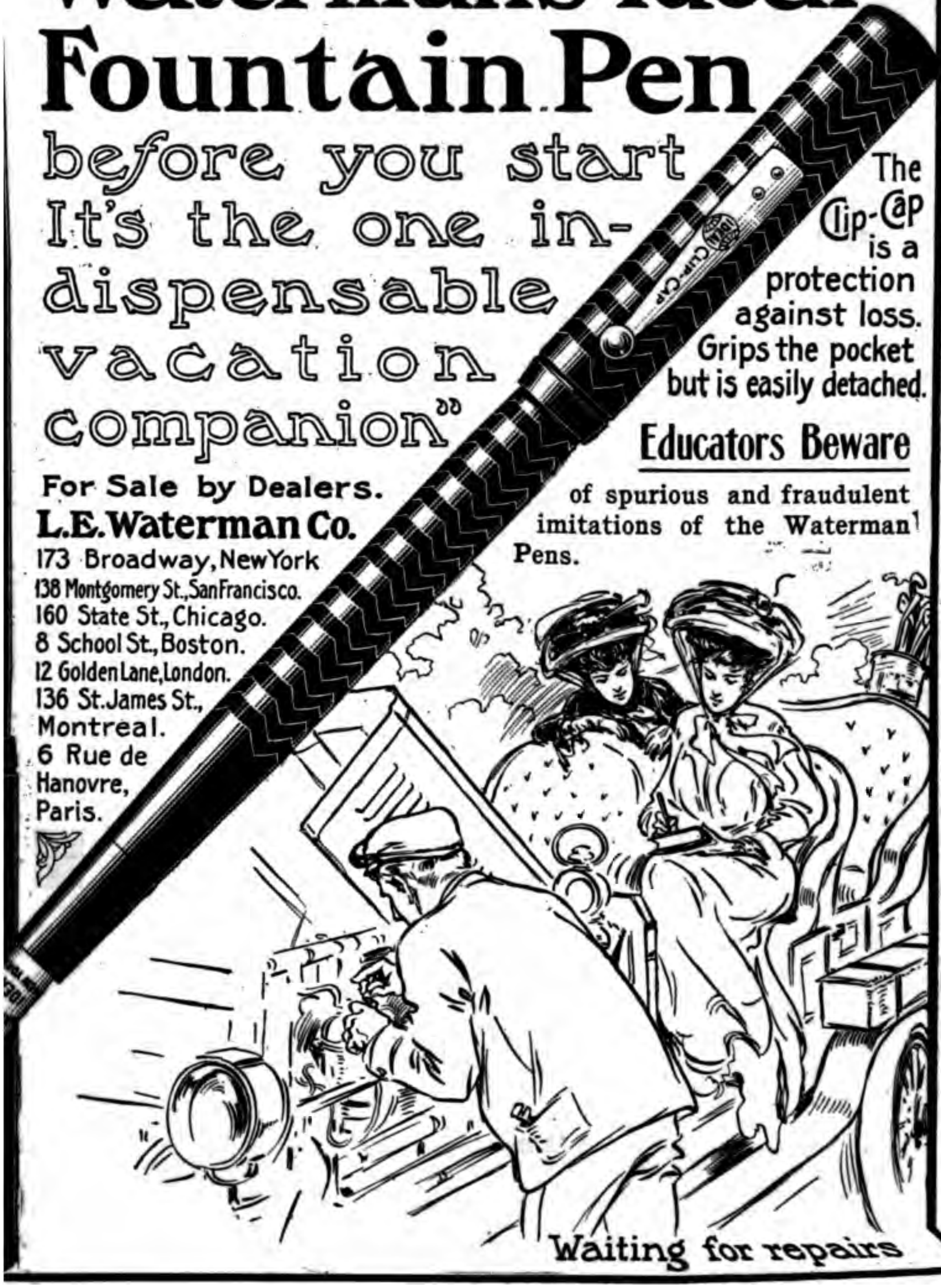

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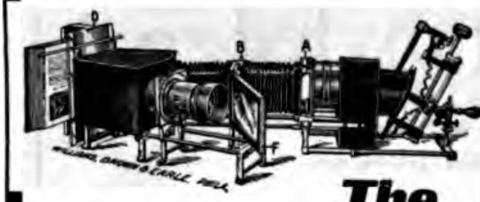

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THE SCHOOL OF EDUCATION

VOLUME V NUMBER 10

THE ELEMENTARY SCHOOL TEACHER

JUNE, 1905

THE UNIVERSITY ELEMENTARY SCHOOL

ITS GENERAL PLAN AND COURSE OF STUDY

WILBUR S. JACKMAN

Organization.— The University Elementary School is one of the three co-ordinate divisions of the School of Education. It seeks to provide proper educational facilities for children through the first ten years of school life, two of these, from four to six, being spent in the Kindergarten.

Beginning with the present year, a change in the general plan of organization is made, with a view to effacing, as far as possible, the distinct lines that usually separate the so-called grades one from another. To this end the entire school is organized into five *Divisions,* representing approximately two school years each. These are designated by letters from A to E, inclusive — A being the lowest, and E the highest. Each Division is organized into two *Sections;* the Sections represent approximately the school years, and, beginning with the Kindergarten, they are numbered from 1 to 10, inclusive. For convenience in certain kinds of work, each Section is divided into two *Classes,* and each of these again into two *Groups,* the latter being numbered consecutively, beginning with the Kindergarten, from I to XL.

In each Division, as far as possible, the work is planned and the program is arranged so that a pupil may recite in either of the Sections, and in any of the Groups for which he may be best fitted. The theory of the plan is that the school organization shall provide such a range of conditions that every pupil may be able to do his best in every subject; also, that it shall provide the easiest possible means by which he may advance himself through the school.

The Faculty.—The work in each Division is arranged jointly, as far as possible, by two Critic-Teachers, each of whom is directly responsible for a Section. In the preparation of plans for the Divisions and Sections, the Critic-Teachers have the assistance of all the other members of the Faculty, including the teachers of special subjects, and of the teachers in the College of Education.

Each teacher of a special subject is assigned to a Section, and is jointly responsible with the Critic-Teacher for the care and general instruction of the pupils in that particular unit. While it is necessary, in order to secure proper breadth and richness of subject-matter, to assign the instruction in some subjects to certain teachers, the school does not recognize "special" or "departmental teaching," as this is commonly understood. The primary interest of every teacher in the school is in the "all-around" instruction which every pupil needs, and the secondary interest is in that particular branch which it has fallen to his lot to teach. The teachers in the College very materially assist in the work of supervision, in the criticism of practice-teachers, and in actual class instruction.

College students as assistants.—The University Elementary School is one of the Practice Schools in the School of Education. The curriculum of the College provides that each student who expects to graduate shall spend three quarters in observation and practice, most of which for elementary teachers shall be in the Elementary School.

This provision, so necessary in the proper training of teachers, is often the source of serious concern on the part of patrons. This is needless for several reasons: First, those who are admitted to this practical part of their work are the equals, and generally above the average in scholastic attainment, of those found in the public schools. Second, they are required to spend at least two quarters in the College in preparation for this work before beginning to teach. Third, their teaching is under the direct supervision and criticism of a special committee of the Faculty. Fourth, they are required before beginning to teach, to present satisfactory plans to the Critic-Teachers and the Principal. Fifth, they are required to meet the Critic-Teacher and the Principal, each, one hour a week for a discussion of their work. Sixth, each practice-teacher understands that his interests are to go far beyond the bit of subject-matter in a set of lessons. He is to consider the condition of the entire room, and he is expected to do the thing most needed. The standing injunction is that no practice-teacher is to leave a room any day without, in some way, having made it better by his being there. The practice-teachers, as a rule, are on the threshold of life's work, though many are experienced teachers. They are intelligent, enthusiastic, conscientious, and anxious to make themselves useful. If under these conditions the practice work does not contribute directly to the efficiency of the school, the fault lies with those in charge, and not with the student-teacher. The school stands for the highest welfare of the pupils; it necessarily pledges itself, therefore, that practice work which does not minister distinctly to that end shall not be permitted.

The term "practice-teaching," as descriptive of work in the school, is frequently misinterpreted. It is often conceived to mean that inexperienced, illy prepared, immature, and irresponsible students are turned loose with a group of pupils upon whom they aimlessly try one vagary after another in the hope that eventually some bit of method may be found which will fit the case. On the contrary, it is carefully supervised, and it is planned with a definite purpose which is threefold in character. First, it furnishes the student-teachers with a direct means of studying vital educational problems; second, it gives them opportunity of testing the means by which educational principles may be applied in the schoolroom; third, it furnishes the University Elementary School with assistance in the classrooms, in the workrooms, in the garden, and on the field trips, of which it is most happy to avail itself. It is the aim to enlist the student-teachers in the life, in all its completeness, of the entire social body of the school. They are given a variety of responsibilities through which they become one with the school in its aims and methods.

That the work of these teachers assumes the nature of experimentation is wholly true; in this respect it merely participates in the spirit which marks the character of all the work in the school. Life itself is nothing but experimentation, and no school is worth a moment's attention of any intelligent person that pursues any other plan. This means, only, that every teacher is expected to watch narrowly every exercise and every mood of the pupil, that tomorrow the school may be made better than it is today. This does not mean the dissipation of effort and the reign of unreason; it means organization and continual growth.

The course of study.—The course of study is organized with a view to stimulating and directing the creative impulses of the pupils. It is through creative activity that the pupil grows intellectually and morally, and the general aim of the instruction is to enlist the personality of each one in the common life and interests of the whole school. The highest purpose of education is the development of a responsible human being; the school therefore endeavors to place upon each pupil genuine responsibility, and to train him as to his duty in meeting it.

It is still an open question in the minds of many people as to whether a school organized on such broad and general lines can accomplish as much on the technical side of training as may seem desirable during the early years. This is difficult to answer for those who are unfamiliar with the methods employed, and who are accustomed to measure the results in the arbitrary terms that are generally used in placing values upon children's work. The cardinal principle of the school is scarcely more than a truism: *The development of skill is proportional to the intensity of the motive demanding its use.* This does not mean that two individuals under an equally strong motive will develop equal skill in any given direction; it means that *the skill which each is capable of developing* will be proportional to the intensity of his motive. Under this idea, the school has just two functions: first, *to deal with motives helping to define, strengthen, and establish them;*

and, second, *to aid the pupils in every reasonable way to realize them.*

Motives are induced as the pupils become participants in the life of the school and home. Even the youngest, the weakest, the most wayward soon find that they can contribute something of value to the whole. This discovery becomes the starting-point (there can be no other) for genuine citizenship in the school. The school, then, becomes an organized means whereby the pupils are made participants in community life, and it is but natural and inevitable, therefore, that we should find in it the roots of all the social and industrial activities, and the consequent civic duties that devolve upon society at large. The breadth of interest thus involved makes a demand for a range of subject-matter, a variety of method, and scientific skill in instruction that were unknown a generation or two ago. Every curriculum prepared for such a school, therefore, appears to be hopelessly overloaded, and correct interpretation of it is impossible for anyone not familiar with the underlying principles. A curriculum is *an analytical description of the whole life which the pupil lives.* The value of the school and the teaching is determined wholly by the *quality of the life which it enables the pupil to live.* This can never be set forth in print, but it is constantly measured by the influence of the pupils and the school, in the home, and in society.

In a word, the school seeks the development in the pupil of such skill in reading, writing, spelling, arithmetic, grammar, and the various forms of hand and art work as he may find need for at any particular stage of his living. It tries to do no more; it makes no concessions to empty drill in response to traditional demands that pupils must know certain set forms for their own sake.

The school is committed to the proposition that life should be pleasant, and, therefore, it believes that the children should be completely happy in their work. It has no sympathy whatever with that soured philosophy which sets the highest educational values upon the performance of disagreeable or unmeaning tasks. It believes, first of all, in the physical welfare and nurture of the children; it believes in recreation and in play. It does not, however, believe that play can take the place of work, nor that the children would have it so, when the latter leads to some end that they can understand. It believes, in general, that children should have less play time rather than more, and more work of the right kind; and, finally, that all the activities of children and youth should be productive in terms of utility and art.

It follows that the school relies very much for its success upon the sympathy and active co-operation of the home. It aims to provide each pupil with a full day of genuine work; and while there are some aspects of study that can be carried on outside of school, as a rule, the teachers do not expect the pupils to carry tasks home to be wrought out by themselves or their parents, any more than would a blacksmith be expected to carry to the fireside his work of the day. The parents can do much more for their children in other ways than they can by merely working out the details of a particular lesson. They should visit the school and take counsel with the teachers. They should watch narrowly the bearing of their children, noting signs of improvement or deterioration. They should plan work about the home that the school may assist in doing, and in every possible way interest themselves in what the school is trying to do through the pupils. In short, the school and the home have a common problem—the nurture and education of childhood and youth. Each has its special function, and neither can usurp that of the other; but both, organized together as one directive educational force, must work toward the common end.

The field trip and excursion.—From the nature of the work attempted, it will be seen that both teachers and parents must make rather unusual efforts to enable the pupils to gather first-hand information as to subject-matter. This has led to the development of the "Field Trip" or "Excursion" as a necessary and permanent means of study. This feature of the school life is not well understood by many patrons, and it is the source of more or less uneasiness to all, the teachers included. Such feeling results, however, in careful precautions, so that, thus far, in a record of sixteen years, during which thousands of children have been transported by rail and boat, no accident has occurred. This is due to several things: First, the pupils, to a remarkable degree, are able to take care of themselves; almost every one underestimates this ability. Second, the pupils are organized into groups, when necessary, and these are placed in immediate charge of older pupils or student-teachers or assistants. Third, many members of the Faculty have had long experience in conducting field trips, and they know how to plan them. Fourth, the teachers always insist that the officers of the railroads shall strictly enforce all rules relating to platforms, etc. Fifth, the trips are planned for a definite end, and the pupils are usually so intent upon what they are to study that the tendency to carelessness and mischief is minimized.

It seems needless, almost preposterous, that in this day, and especially in a center of activity, physical and mental, like Chicago, one should make an argument in favor of field trips. Everyone must know how much more vivid impressions are when they are received directly from the thing itself which is being studied, than they are when transmitted by any other means. It is simply ridiculous to keep children confined in a schoolroom learning *about* a world while they must live *in* it.

The schools of Chicago are particularly favored in their environment. Beginning with the sand dunes on the lake east of the city, a semicircle with a radius of an hour's ride stretches around a hundred miles and again touches the lakeshore on the north. This semicircular belt includes a region of unusual interest. The remarkable phenomena of the building and shifting dunes, with the peculiar life-forms, can be duplicated in but comparatively few places on the globe. The beach, the lagoons, and the marshes tell in vivid pictures how land forms and soils are made and changed. The low timbered ridges, the shallow valleys, the course of the crooked streams, the scratched and furrowed rocks, the quarries and beds of clay and gravel, all tell of epochs in world-history that are of absorbing interest. The various rural industries — farming, stock-raising, dairying, and gardening — are well represented. Cityward the field of study is equally interesting. On a trip by boat up the Chicago River the children are brought into touch with trade and industrial ganglia that through the nerves of commerce reach remote regions of the earth. The great manufacturing plants, the huge warehouses and retail stores which handle every conceivable necessity and luxury in human life, are subject-matter for lessons of the most practical kind; these have no real substitutes in books or pictures. The School finds, too, almost without exception, that those in control of these great centers of interest are more than willing to open their doors to the pupils and teachers, and to place intelligent guides at their disposal.

Since the field work enters so largely into the life of the school, it is necessary that all the pupils should participate in it, and the parents are always cordially invited to accompany the school, when they can find it convenient to do so.

Pupils may be excused from an occasional trip on the ground of some temporary disability; but no general excuse will be granted to anyone, and parents are asked especially to note this provision before registering their children.

The Parents' Association.—This organization is composed of the patrons and others who are interested in educational problems. It offers definite means for concentrating the influence of the home and school upon whatever features of either may seem to be worthy of study. It is operated largely through two committees —Home and Education—which hold monthly meetings with the teachers of the different Sections. There is also a general monthly meeting for the consideration of selected questions. In order to get into still closer touch with the school, it is proposed for the ensuing year that representatives of the committees be present at the weekly Faculty meetings. The value of this co-operation cannot be overestimated. Nothing else does so much to break down the traditional barriers of one kind or another which in the past have existed between the parent and teacher, to the detriment of the children. It is most earnestly hoped that every parent will become an active member in this association at the time the pupils are registered.

Morning exercises.—The morning program embodies on four days in the week the "Morning Exercises." The entire school assembles for about twenty minutes for songs, the reading of a bit of good literature, dramatics by the pupils, descriptions of field trips, and other matters which serve to interest the children and teachers as a whole. There is no influence in the school that does more to bind it up in unity of spirit, good feeling and action. The various needs of the school are under frequent consideration, and ways and means are planned by the pupils for meeting them. An effort is made to keep the exercises as simple, childlike, and informal as possible, in order to beget sincerity of thought and ease and naturalness of expression. It is here that the life of the school is most truly reflected. Anyone is at liberty — indeed, he is urged — to bring up any point that may need attention, and in the long run these exercises wield a most potent influence for good, and do much to give real meaning to the watchword of the school — RESPONSIBILITY.

Faculty meetings.— The Faculty of the University Elementary School is organized as a compact student body for the sole purpose of studying the needs of the school. Meetings are held regularly once a week, and in the course of the year there is scarcely an aspect of educational work, so far as it is represented in this school, that is not passed in review. The ordinary routine is handled very largely through committees; the main part of the meeting is given over to a discussion of educational principles that are involved in the work of each teacher. The discussion is usually informal, and is frequently based upon an outline of points prepared by one or more members. These meetings are the clearing-house of the school; it is through them that each teacher gets into closer touch with matters that lie beyond the range of her actual class work. They furnish new points of view which call for constant revision of opinion. The real purpose of the meetings is not to settle educational questions, but to keep them perpetually open, so that new adjustments to changing conditions may be made as frictionless as the processes of growth.

The use of books.— There is a general impression that in a school which gives so much of its time to the study of nature, art, and the handcrafts, there must be a corresponding neglect of books, and therefore the literary side of life must suffer. The contrary is true. Everything that the pupil sees or does tends to drive him to books for help, as he would go to a teacher. The school therefore makes constant use of the large and well-selected library, and it also requires the pupils to provide themselves with a few standard textbooks. The natural stimulus toward reading is much stronger than it is in a school where the pupils have less contact with things. Literary taste is developed, not only through the use of good books, but also through self-criticism of the pupil's own written work.

Books are supplemented by thousands of pictures and hundreds of lantern slides which cover almost every field of interest comprehended in the pupil's life.

The museum and collections.—The school grows through the study and criticism of its own work. To afford better opportunity for this, the pupils are required to place in the museum, for the purpose of study, the various articles of handwork that they have completed in any quarter, and these, properly labeled, are to remain there in the custody of the school during the next ensuing quarter. The museum is also made the center of appropriate working collections gathered on field trips and otherwise, just as the library is the center of interest in books. It is not the chief aim to fill the museum with the unusual, the rare, or the curious, but rather to make it an illustrative adjunct in a simple way, to the common things that are studied.

It contains also a large number of mounted specimens, both dry and wet, which illustrate the chief topics in human physiology, zoölogy, botany, geology, and mineralogy. A representative set of birdskins has been added recently through the kindness of Mr. Elliot Blackwelder. These are very useful as an aid in the identification of the birds in the vicinity. It is proposed to add to the collections such living forms of animals and plants as may be cared for properly in the garden. A hive of bees has been installed there in an open observatory hive for convenience in study. The work in history and the arts is supplemented by well-chosen selections showing something of the industrial and artistic development of the race.

The school garden.—By a wise provision of the founder, a plot of ground embracing one and a quarter acres has been permanently set aside for a garden. Fortunately, the area selected is already beautifully planted with lilac hedges and other shrubs, and also with many elms now well grown. A sufficiently open area lies at one end of the grounds to meet the demands for a vegetable and flower garden. This also contains a rose-bed. The garden is used to enable the pupils to test the soil with a view to determining how much a plot of ground will produce of a given kind of plant, and to afford them an opportunity to study the habits of plants. During the year the pupils have shown much personal interest in taking care of the garden and the grounds in general. Several beds of tulips have added materially to the appearance of the early spring landscape.

In one part of the garden the planting of the shrubs has formed a natural setting for an open air stage. This faces a grassy slope which accommodates an audience thus adapting the place in a charming manner to outdoor dramatics. This place will be used during the summer by Ben Greet and his players in presenting Shakespeare.

Laboratories and workrooms.— The aim is to make the building as convenient as possible for the purposes of work. There are no desks or chairs fastened to the floor, thus making it easy to clear the room or modify the seating in any way that may seem desirable. The desks are of special pattern, designed with level or table tops. They and the chairs are adjustable. Rooms are set apart for laboratories, for woodwork, clay-modeling, casting in plaster, textiles, cooking, metal-work, printing, and bookbinding.

In the latter years of the course it is intended to permit the pupils to make some choice in handwork with a view to specialization. In some of the departments mentioned, therefore, the equipment is designed to meet at present the demands of small groups of pupils; in others, such as woodworking and clay-modeling, the equipment is sufficient for use of twenty or thirty pupils at one time.

A large camera obscura has just been placed upon the top of the central tower. This throws a six-foot picture of the surrounding landscape for a radius of several miles with all its moving objects upon a stage in a dark room underneath. It is used in the study of Geography, Nature-study and Art.

Civics and the social life.— When the lives of children are filled with useful work, relieved by proper opportunities for recreation and play, government becomes an astonishingly simple matter. The quality of life, as it manifests itself naturally in the conduct of the pupils, is the highest and final test as to the worth of this school to the individual. It is generally understood among the pupils that no one can enjoy the privilege of promoting himself if, in so doing, he would leave an unworthy record behind. Promotion under any other condition is self-contradictory. This record is not summed up in arbitrary marks set down by the teacher, but it is recognized by the same manifestations that distinguish character in every walk of life. The school realizes the utter futility of trying to teach anyone anything when he is not in a happy frame of mind. No effort is spared, therefore, to establish conditions that are conducive to good nature. As a result, we have a school where it seems as though everyone is not only doing his best for the general good, but he is in a state of mind which enables him to receive the best that the school can give.

The emphasis is not placed upon textbooks nor upon subjects of study as ends. It is placed upon QUALITY of LIFE as this expresses itself in good taste, helpfulness, gentleness of spirit, sensitiveness to the rights of others, initiative, fidelity to conviction, and trustworthiness, all of which are so necessary in the realization of democratic ideals. It is then possible to reduce the mere machinery of government to a minimum, and to conserve the time and energy of the entire school for the highest ends.

THE CURRICULUM

In setting forth the work of the school in an outline form, one is almost entirely limited to the necessity of doing so in terms of subject-matter. In this way it is misleading. It shows at once too little and too much; it shows too little of the spirit that vitalizes the community, and too much of subject-matter. It must be left largely to the intelligent reader to gather from the general drift of the synopses some idea of the life which organizes the more or less disjointed parts, and it must be left to his good sense to discern how selections can be made from the boundless fields of subject-matter to suit the needs and capabilities of the children.

The following statements by the departmental teachers in the College of Education give something of the aim and scope of the work throughout the school. The more specific statements prepared by the Critic-Teachers which follow show the plan and substance of subject-matter in more detail for each school year.

ENGLISH

The study of English naturally occupies an important place in the school. Beginning in the earliest years with oral language, the children are taught the written forms, as they become necessary in their thinking. The daily work calls for such constant use of language that abundant material for the study of English is always at hand. The effort is made to teach strength and the graces of the mother-tongue through the demand upon the pupil that he shall express himself at all times in clear and concise language. As matters of economy, he is early taught the simpler rules for punctuation, the use of capitals, etc. The sentence as a unit of thought receives careful attention from the beginning. In the later years, especially the last year, the study

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[1] The statements under English and Geography were prepared by the Principal.

embraces the ordinary rules of grammar as applied in a critical study of their own language forms. As soon as the pupils begin to learn to read, they commence compiling dictionaries of their own; later each pupil is required to purchase a dictionary, and he is trained critically in the selection and use of words.

SPEECH, ORAL READING, AND DRAMATIC ART

It is the aim of this work, first, to bring about freedom and expressiveness of voice and body; clearness, distinctness, and beauty of speech — good spoken English — by training the ear to hear, and the speech organs to form, well-shaped vowels and distinct, clear-cut consonants; second, to train the children to read intelligently and with a purpose; and to read aloud simply and naturally, with a clear perception of meaning, emotional content, and form. This will be done through the interpretation of literature, by means of extemporaneous speaking, and by the writing and acting of original dramas. Whenever possible, the literature being studied in English, French, and German is utilized for these purposes. The aim throughout is so to organize both the study and expression that the children shall acquire, not only independence in the use of reference books and literature, and freedom and spontaneity in expression, but also ability to think and do — that persistent and continuity of thinking which will enable them to handle new material — new literature — with intelligence, purpose, and increased power.

With the majority of children real, living interest in reading seems to develop rapidly about the fourth year of school life. If up to this time the background has been well filled in by the constant functioning of words when the child felt the greatest pressure for their use, he has a key to the situation. Technical difficulties are mastered under the new impulse with marvelous ease and skill. By the time he reaches the ninth school year he not only can read for his own pleasure and entertainment, but gradually a definite motive for reading has been developed, and he is able to use books intelligently in the study of subject-matter.

The organized social life of the school, the daily morning meetings, the special-day exercises, and the festivals of the year give motive and opportunity for practice in oral and dramatic expression.

With the purpose of laying the foundation of an abiding love for what is noble and beautiful in our literature, the teacher interprets a limited number of suitable selections to the children which they can understand and enjoy, but cannot read for themselves.

It is the aim to note every speech-defect, to watch the child, and, at the proper time, to give him the necessary help toward overcoming his defect.

FRENCH

Aim.— The acquisition of the French language is not sought as an end in itself. The language of a people embodies their spirit. To learn a language is to know the spirit of its speakers, and to be eager to know all that concerns and expresses them — their manners, their customs, their literature. Thus is born and fostered social sympathy.

Methods.— Dramatic methods are used for several reasons. The strength of dramatic appeal is great because of its wide range — the stimulus coming through the eye, the ear, and the muscles. The close attention which comes from the pupil's interest and absorption in dramatic work is the strongest foe of self-consciousness. In no other way can such vivid impressions, both historical and linguistic, be produced. And, finally, through dramatic dialogue idiomatic phrases can be most readily and naturally learned.

Rounds, songs, historic games, and simple dramatic representations are activities suited to the child. The folklore of France, beginning with the simplest occupations of family life, form the basis for the study of the language in the Elementary School. The following are a few of the games and rounds characteristic of the people: "Il était une bergère" — shepherd life; "Sur le pont d'Avignon" — building, customs; "Avoine, Avoine, Avoine" — sowing and reaping; "La tour prends garde," "Malbrough s'en va-t-en guerre"—war; "Au clair de la lune"—home life; "Quand Biron voulut danser"—dress; "Qu'est-ce qui passe ici si tard?"—chivalry; etc. Following, and almost in connection with, these rounds and historic games, stories and plays are taken up, as: *Noël, Les Vendanges, St. François d'Assises, Guillaume le Conquérant, Jeanne d'Arc, La Salle, Joliet, Versailles, Louis XVI, La Fayette en Amérique,* etc. These plays are based upon French festivals, events prominent in French history, and things characteristic of the life and the feelings of the French people. This rich, picturesque kind of history involves the study of manners, customs, appropriate settings, and national music.

Throughout the work careful attention will be given to the memorizing of grammatical forms, but the effort will be to make this part of the work incidental, and to lay the emphasis on substance. A breath of life enters the dry bones of grammatical construction, when the lessons are the outcome of a real need.

GERMAN

It is the aim, in teaching German in the grades, to give the children as large a vocabulary as possible, to enable them to use this vocabulary, to give them a good pronunciation and a fair understanding of the spoken language, and above all to make the German language a living thing to them. That is to say, this new subject must enter into their lives; they must realize that there are children who feel and talk and play as they do, although they speak German. This aim may be reached in different ways.

In the earlier years the German must stand for everyday occurrences and actions, or for ideas in which children are especially interested and which they fully understand. One is perfectly safe, however, in going back, as far as thought is concerned, two or three years. For instance, sixth-year children are delighted to learn rhymes, etc., the thought of which really belongs to the kindergarten age. Another means of making the language real is the correlating of the German with other subjects. This is being done whenever deemed profitable. A third way is the use of plays. A play surrounds the children with the natural condition of the language, and is therefore the best substitute for a sojourn in a foreign country. Moreover, the frequent repetition of phrases, which is the best possible training for the ear, loses in a play all of its monotony because of the intense dramatic interest. It is hardly necessary to mention that subjects of plays given to children for the purpose of learning a language should be taken from the realm of children's ideas. That is to say, the children must represent what foreign children of their age in a foreign land would do. They must not use language expressing ideas which are foreign to them, for then again the language becomes unreal.

MUSIC

The object of the music work of the school is to awaken in the children a love for good music and to enable them to arrive at the meaning of the printed page. The course is a part of the curriculum, and begins in the kindergarten, where chief stress is laid upon ear-training, to get the children away from the "talking tone." This ear-training is carried on through the grades by means of interval study, the scale, and part-singing. It is expected that all cases of tone-deafness shall be overcome before leaving the grades. Attention to quality of tone is given throughout the work, and strident, harsh, or breathy tone corrected. Rote songs are used exclusively in the primary grades, and later are occasionally resorted to as inspirational material. Such songs are selected from the highest sources. Familiarity with musical notation is acquired through the writing of familiar phrases, as well as by the reading of exercises and songs. The children are led to give original musical settings to words of their own or to selected verses. The exercise of the creative faculty is an indispensable stimulus to the music work.

PHYSICAL TRAINING

The physical training of the Elementary School is carefully adapted to the needs and capabilities of the children comprising the various groups and grades. Growth, development, and functional activities are considered in their physiological relations.

System and method are designed to provide the opportunities for the more comprehensive motor activities otherwise derived in the ordinary school curriculum.

The direct and indirect effects of all forms of school work are carefully noted, and a normal development of the body constantly kept in view. Defects, as well as all important changes, are closely watched, and any deviation from the normal body counteracted through emphasis upon volitional control, acquired in specially directed gymnastics.

Correct habits of bearing and carriage and poise in address are steadily cultivated in educative and recreative activities, designed to emphasize persistence and self-care, the vital functions being carefully guarded in moderately regulated demands of sustained activities.

The physical training proper, not immediately connected with subjects of study and expression, will be of two kinds — concerted and individual. Pupils not equal to concerted work receive individual instruction in prescribed corrective work, college students being assigned for this purpose, who record results at regular intervals.

Physical exercises are given between recitations, whenever needed, and plays and games and athletics of all kinds, under the direction of experienced trainers, form part of the regular afternoon program.

Parents are earnestly requested to take careful and watchful interest in the physical development of their children in and out of school.

The medical staff of the school, in charge of the physical examinations, including sense-tests, vision, hearing, and teeth, and supervision of the seating and ventilation in the classrooms, will confer with parents or guardians whenever necessary. The physical-training specialists in charge of the physical training proper will advise on all matters pertaining to physical development and correction of defects.

ART

The primary aim of the art work in the Elementary School is to afford æsthetic and artistic development. Because art, from its very nature, expresses the interest of the artist, the subject-matter of the work in a large degree grows out of the organized life and experiences of the children in the school.

The crafts are the basis and initiative for design. Various forms of subject-matter afford the stimulus for pictorial expression. Incidentally such expression reinforces subject-matter. It does so, not because it reiterates facts already known, but because it views them from the standpoint of a new situation, viz., the æsthetic.

The following diagram will serve to indicate the various questions which are involved in planning a course of art instruction in any school:

AGE	MOTIVE OR INSTINCT	TECHNIQUE	METHOD	SUBJECT-MATTER
	By motive is meant such elemental or racial instincts as the utilitarian or the æsthetic.	What kind of control must the child gain at different ages, so as to insure continued growth and satisfaction?	How can the desired control best be developed in accordance with stages of mental growth?	Under this is included the individual and temporary interests which must vary with the school environment, the curriculum, and even with the personnel of the class.
	Do these motives stimulate art expression in the individual?	This is not a question of subject-matter, but of emphasis upon certain phases of expression.		
	If so, which of these seems to dominate at various ages?			

Technique and method are placed between motive and subject-matter, because they should occupy an intermediate position. They represent the means by which the instinct is satisfied through the realization of particular ends, included under subject-matter. Subject-matter is the constantly changing factor in the course of study. Method is governed by psychology, and technique by the laws of art.

DRAWING AND PAINTING

For the work in drawing and painting in the Elementary School, water-color paints, charcoal, and pencil are used.

In the selection of subjects there is a close connection with the interests arising in the school, as is indicated in the outlines for each year. In this is offered the opportunity to enrich by expression in form and color the impressions of a particular subject in the curriculum, and this expression involves special technical and general æsthetic improvement.

Close analytic study of models, which can be carried on with older students, is not generally possible with those in the elementary groups, but there is developed an appreciation of the æsthetic attitude of mind toward the subject to be represented.

In dealing pictorially with the subjects suggested in the outlines, the emphasis is placed on the technical and æsthetic phases which are within the grasp of the pupil at the time. Through this emphasis there is possible a growth in the power of visualization, and muscular control in recording these observations. Æsthetic motives become dominant factors in the selection and arrangement of the subject in the pictorial panel.

Work in design, emphasizing balance in the form and tone qualities of spaces, and their arrangement in the panel with regard to harmony and contrasts of colors, deals with the same æsthetic laws which control picture-making, but, owing to its greater remoteness from the concrete stimulus, is more evidently controlled by these laws. The skill gained in drawing and painting will assist in this important work.

CLAY-MODELING

Clay as a medium seems to be especially adapted to the use of little children, because of the ease with which it may be manipulated, because of the permanent character of the finished product, and because of the real social value of the object which may be produced.

Modeling serves not only as a mode of expression for the thought which is inspired by subjects included in the curriculum of the Elementary School, but is often connected most intimately with the experiences and interests quite outside of the school life. For the children of the lower grades it is valuable as an introduction to drawing and painting, inasmuch as it furnishes an opportunity for free expression with problems of perspective eliminated.

It is much less difficult to reproduce a form in a plastic material (modeling it exactly as one conceives it to be) than to represent this form of three dimensions on a perfectly flat surface. Moreover, if we believe in the cultivation of the tactual as well as the other senses, we must appreciate this actual physical contact with material and the more perfect realization of form which must come to the student through two channels simultaneously rather than through one.

The study of pottery, while it is a part of the work almost common to the whole school, is so arranged that a new technical problem is presented in each year. The entire course covers the designing and modeling of forms and the decoration of these objects with bright and matt glazes and with underglaze decoration.

TEXTILES

The aim of the teaching in textiles is to give children experience in the fundamental clothing processes, first-hand knowledge of the qualities of fibers and fabrics and understanding of the discoveries and inventions which have perfected textile machinery, and a basis for the appreciation of textile design. It is hoped that such teaching will initiate an interest in all textile work and workers, and direct the students toward an intelligent understanding of sociological conditions.

With this end in view, clothing, in its broad sense, is made a fundamental subject of study throughout the Elementary School. The youngest children begin the study objectively, using only such processes as they can invent and control. In the successive stages of spinning, dyeing, weaving, and sewing, from the making of crude mats and baskets to the finishing of garments and weaving of fabrics, the pupils develop skill, and through their successes and failures learn the universal history of textile evolution.

Interpreted by lessons in applied science, history, and design, work in the textile arts becomes a center of definite and usable knowledge.

WOODWORKING

In the Autumn Quarter the children of the last four years make Christmas presents, choosing, under the guidance of the teacher, the articles to be made. The plan, however, permits the making of any particular apparatus needed for science or other work. In the Winter Quarter they work upon class or school problems, either individually or in co-operation. For instance, the fifth-year pupils will make and furnish a plantation house. The house will be the outcome of the study of colonial history, and will be given to the school museum. If in the plan of a year the work does not especially call for illustration in wood, the children in the woodworking department devote themselves to such general school needs as happen to be uppermost. In the spring, the children follow, under guidance, their own wishes in the choice of things to make.

In these years there will be (*a*) free-hand drawing for proportion and design, (*b*) reduction of these drawings to working drawings, (*c*) blue prints of these mechanical drawings gradually introduced according to the skill of the pupils.

All, in proportion to their development, study (*a*) the history of the growing tree, (*b*) the process of lumbering, (*c*) something of lumber physics, (*d*) the myths of trees.

Throughout the work there is growing emphasis on technique, with instruction concerning the care of wood, finishing, and polishing.

METALWORKING

Metal offers a material by means of which the child may make objects that are both useful and artistic. Working with it develops a control unlike that found in the other handicrafts. This material has a very intimate place in daily life, and the use of it suggests questions in science and history which, if answered, will show the development of the metal industry from the first crude operations of prehistoric peoples to the more complex processes of today.

The work in this school is now in its beginning, as it has been carried on this year only in the sixth and eighth school years. There will therefore be great similarity in the processes throughout the school for next year.

Metalwork has many possibilities, among them the following: (1) Simple articles of social use, on which decoration may be etched, pierced, chased, or engraved. (2) It may be used as decoration in woodwork or in connection with pottery. (3) It is the material best adapted for jewelry, as brooches, belt buckles, hatpins, etc., including all the processes necessary to the jeweler's craft.

BOOKBINDING

The work in book-making is related to the study of the mediæval period of history assigned to the tenth year. The stories of the devotion with which the monks wrought their beautiful manuscripts, and the earnest and painstaking work of the early binders and printers, offer inspiring and useful reading. The following outline gives a course planned for one year, for a group of ten children in the tenth year, and also the equipment needed:

First process: (1) Making a portfolio. (2) Case binding: folding; sewing; putting in boards; covering; blind tooling.

Second process: Putting a book into a half-leather binding: tearing apart and mending book; sewing; backing. Putting into boards: head bands; covering; tooling.

Third process: (1) Putting a book into full-leather binding: different kinds of sewing; backing; putting into boards; head bands; covering; tooling. (2) Library binding.

School equipment: 5 sewing-frames; 3 letter-presses; 1 cutting-press; 4 finishing-presses; 1 photograph-cutter; 4 sets of backing-boards (can be made in manual-training shop); 4 lithographic stones, blocks of marble, or squares of cut glass; 4 knocking-down irons (flat-irons can be used); 1 glue-pot; type and pallets; simple tools for finishing. This equipment will cost about twenty-five dollars.

Individual equipment: Folder; cutting-knife; scissors; straight edge; square; leather knife; bodkin; hammer; 4 tins; 2 pressing-boards; paste brush; library paste. The total cost of this outfit is about three dollars and a half. A number of the things are already owned by the children, or can be borrowed from other departments.

Stock: leather; cloth; paper; boards; sewing-cord, tape, and thread; silk for head bands; glue; paste.

Books: Aldrich, *Friar Jerome's Beautiful Book* (poem), (Houghton, Mifflin & Co); Brassington, *History of the Art of Bookbinding* (Stock); Bouchot, *The Book: Its Printers, Illustrators, and Binders* (Grevel); Cockerell, *Bookbinding and the Care of Books* (Appleton); Davenport, *English Embroidered Bookbinding* (Dodd, Mead & Co).

COOKING

The work in cooking in the Elementary School finds its chief justification in its social value, both in its direct influence upon the life of the school, and in the interest that it stimulates in the home life. It is so directly related to the every-day life of the children that it makes a strong appeal to their interest, and the fact that they are able to apply so immediately the skill acquired gives it additional value.

As a form of applied science the cooking suggests many problems to be worked out, and cultivates the power to apply theory to practice, while it gives control of material, and develops a sense of individual responsibility. It also furnishes a strong motive for much of the formal work in reading, writing, and number, and illustrates and emphasizes certain phases of geography and history.

The work is so planned that during the course the children become familiar with all the ordinary processes of cookery and with the different food principles. They gain skill in the combination of food materials and a knowledge of the composition and nutritive value of food. The lunches served from time to time develop in the children the spirit of hospitality and grace in extending it.

In the earlier years cooking is chiefly considered as an activity, and later the more scientific aspects of the work are developed, while the social purpose is emphasized throughout.

In the tenth school year in addition to the cooking, chiefly employed when needed for special occasions, a study of the house is made.

MATHEMATICS

Through constructive work, games, drawing, and children's activities, the kindergarten and third year afford exercise in such measurement and counting as furnish the image cores, or concept germs, of number and form.

The fourth to the seventh years, through the use of real quantitative material drawn from home, community, and school occupations and activities, and from the other studies, make the number and form work real and purposeful, secure mastery of the tabular facts through ***abundant natural uses,*** and provide drill enough to keep process from obstructing thought.

The eighth school year applies the knowledge gained to questions of barter and valuation called for by those activities that have to do with the food, clothing, and shelter of man, and that touch a wide circle of human interests and concerns. Skill in process is kept up and heightened through (*a*) the incidental and (*b*) the formal mastery of common and decimal fractions.

The more technical occupations of the contractor and builder, the banker, the money-lender, etc., which have to do with the larger affairs of the community and the nation, are studied in the ninth and tenth school years. The arithmetic is bound together through generalized number. The work is essentially correlated arithmetic, elementary algebra, and geometry. Percentage, interest, and measurement are given a real setting among those human concerns that make them essential parts of the elementary curriculum.

NATURE-STUDY AND APPLIED SCIENCE

The field of nature-study embraces the various features of the surroundings of the school which can be kept easily under continuous observation. The aim is to plan the study, and to assign the different areas, so that by the time the pupil has passed through the school he will have an intelligent knowledge of the natural features and productions in this vicinity. It is intended also that he shall get through applied science a knowledge of the scientific aspects of our industrial life. The former furnishes a sound basis for work in geography, as the latter does for history. To the nature-study of the school, geography *adds the perspective of space,* as history *adds the perspective of time,* and all three therefore contribute directly the upbuilding of a great world-picture which embodies in due proportion the scientific and historic aspects of human life.

The entire school takes part in the care of the garden and grounds. The pupils of each year choose some definite work for which they agree to become responsible. Similarly, outside of this, an area in the adjoining parks is chosen and studied with a view to becoming acquainted with the life-content and the physical conditions affecting that particular field. Graphic records are kept with a view to representing the events of the season. The aim is to organize and record the observations so as to preserve the coherence and the unity of the rolling year. In this work drawing and painting, modeling and writing, play an important part. Reading, number, and the beginnings of geometry also contribute to the final results. This work is strongly supplemented by field trips to outlying but convenient regions more fully noted elsewhere.

GEOGRAPHY

Geography deals with the social, industrial, and political relations of people, with especial reference to the influence of the climatic and other physical conditions which affect their lives. By means of systematic field work, the pupils become acquainted with certain definite physiographic types in the vicinity of

Chicago. These embrace building and wearing action on the lake-shore; the formation of valleys and river systems as a study of natural drainage; the formation of bogs and marshes, and a study of soils as a basis for agriculture, with some consideration of the distribution of life. The geological history of the region, mainly through the numerous and interesting evidences of glacial action, is necessarily worked out to a considerable extent as an explanation of present surface forms and conditions. Due attention is given to local meteorological phenomena.

A careful study is also made of the geographic relations of Chicago: the physical features determining its location and mode of development; its natural commercial advantages — the river and lake; and the means by which it has turned the physical conditions to the advantage of human life. The city is also studied as an organizing trade center of the middle West, through its lake and railroads, as both a receiving and distributing depot.

Upon this primary regional study rest the geographic pictures of a continental and world-type that are developed in the middle and later years of the course. The geography of each continent and important country is followed out along lines similar to those pursued in local study and in close connection with the subject of history, especial attention being given to our own continent. In the last year the pupils have reached a point where life-distribution, as determined by climatic and other factors, can be profitably studied.

The work is supplemented throughout by the use of sand-modeling and chalk-modeling, and by the use of a large indoor geographic laboratory especially constructed to show typical processes of surface changes.

HISTORY

The study of history in the University Elementary School begins with the third school year. That history is not used for the younger children in most schools is due to the fact that people usually think of it as relating especially to political and governmental affairs. The average person, when asked why children should study history, says: "To cultivate patriotism, and to fit the children for citizenship;" meaning by this, for the duties of the voter. On the other hand, in the last few years the study of social science and economics has changed to some extent our views in regard to the nature of history, and shown us that political conditions depend largely upon industrial conditions. Much more emphasis is now placed upon industrial and social history in higher institutions than formerly, and much more attention is given to them in the writing of history. The lower schools have not yet adjusted themselves to the new conception.

Much of our history is based upon the occupations of the school. Creative work is the center of the course of study for the younger children, and often the point of departure for the later years. But as the children gain in power, their study of history is gradually differentiated from the occupations and the other studies.

The children of the early years find their problems chiefly in the home. They like to share in the occupations of others, and they dramatize in their play these occupations. These things that they do put questions to them — questions that are rarely answered in the home, at least in such a way as to give the child added power over his own experience. In school the occupations may be so organized that they form the natural entrance into the field of knowledge in science and history.

The interests of the children in the middle years take in the larger social group, the neighborhood — here, the city — with the occupations of the people, their trade and commerce, and our public works. Pioneer life is very close to the sympathies of the children, and we have in this country an abundance of material for it, both in our local history and in that of earlier colonies.

OUTLINES OF WORK FOR EACH SCHOOL YEAR

DIVISION A

SECTIONS 1 AND 2 (KINDERGARTEN — FIRST TWO SCHOOL YEARS)

Autumn Quarter. Subject: Homes. Topics: (1) homes of people; (2) of dolls; (3) of domestic animals; (4) of birds; (5) of plants and their seeds.

Winter Quarter. Subject: Commercial exchange that comes closest to the home, as grocer, milk-man, coal-man, ice-man. Source of their supplies, and how brought to us; transportation for provisions and for people: trains, sleighs, wheelbarrows, wagons, street cars (both elevated and surface).

Spring Quarter. Subject: Gardens. (1) Garden beds — shape and divisions; (2) trees and birds in garden; (3) animal life in ground and on plants.

Science or nature-study.— Areas around which the year's work centers: (1) garden; (2) the lakeshore; (3) the Midway; (4) South and Jackson Parks. Science observations: sun, clouds, rain, wind, frost. Seasonal changes: effect of frost on plant life, animals, and people. Daily changes of weather and effect on movements of people. Observation of movement of sun by noting through which windows we have the sunlight; gathering seeds and watching how they are distributed; watching habits of late birds; nuts, fruits, and vegetables classified according to the way they may be preserved and stored for winter; collections of cocoons, caterpillars, leaves, and seeds.

Winter Quarter: Winter landscapes; influence of wind, rain, and sun on snow-covered areas; which wind brings rain, snow, cold, moderate temperatures; formation of snow and ice crystals as they appear.

Spring Quarter: Relation of heat, light, and moisture to plant and animal life; comparison of vegetation at lakeshore, in garden and park; planting indoors as a preparation for outdoor work; observations of work of earthworm outdoors and in a box with glass sides; collections of grubs and worms, and study of bees and ants at work; constant observation of special trees, noticing changes as spring comes on; direction of prevailing wind; effect of wind in park and garden.

Literature.— Autumn Quarter: Nonsense and Mother Goose rhymes: "The Clucking Hen," *Aunt Effie's Rhymes;* "Thanksgiving Day," by L. M. Child; "Jack Frost," by Hannah Gould; "A Visit of St. Nicholas," by C. Moore; "A Real Santa Claus," "Clouds," and "Leaves at Play," by F. D. Sherman; "The Magic Curtain;" "Story of St. Christopher;" "Story of the First Christmas."

Winter Quarter: "The Swan Maidens" and "How the Robin's Breast Became Red," by F. J. Cooke; "Little Table, Dish Up," from the Norwegian; "How Fido Carried the Milk," by A. E. A.; "Wizard Frost," "The Juggler," and "Hide and Seek," by F. D. Sherman.

Spring Quarter: "Hermes," by F. J. Cooke; "What Was Her Name," by Richards; "The Broken Wing," from the Norwegian; "Rhoecus;" "Peter at the Dike," by Cary; "I Know the Song That the Bluebird is Singing," by E. H. Miller; "Who Stole the Bird's Nest," by Child; "The Brown Thrush," by Larcom; "In a Hedge."

Gift-work.— Building with large blocks, houses, foundations, rooms, furniture; designing with tablets, floors, tiling, and oilcloth; building with blocks and sticks — trains, tracks, wagons, car-barns, stores, counters, and cupboards; making garden fences and walls of sticks or blocks; marking off beds for planting in garden with lentils and sticks; making bird-houses; illustrating stories.

Handwork.— Christmas presents; paper-folding and pasting of doll and animal houses in simplest forms; work incidental to the celebration of Hallowe'en, Thanksgiving, and Christmas; grocery and milk wagons of heavy paper or wood; also street cars, trains, and sleighs; ice-picks and tongs; May baskets, tools of cardboard or soft tin boxes; bird-boxes and garden stakes.

Number.— Limitation of number decided by space and distribution of materials; through number a child's first definite ideas of limitation are gained; recognition of numbers in groups of 2, 3, 4, 5, and 6 may be gained during the year, such as: two partners, three on a committee, four inches, five or six inches in building, etc.

Modeling.— Autumn Quarter: Balls, marbles, tea rests, seeds, fruits, flower-pots, nests, pods.

Winter Quarter: Milk-cans, bottles, measures, crocks, and pitchers modeled; also winter fruits, blocks of ice; ice-picks and tongs.

Spring Quarter: Birds, nests, eggs, worms, grubs, seeds, twigs, vegetables.

Painting.— Fall landscapes; experiments in all-over washes and flat brush designs in color for decorations on Christmas gifts; pictures of fruits, leaves, and seeds, and designs made by grouping, and distributing these forms in limited spaces; illustration of stories; landscape at beach, in garden, and park; single trees; flower-beds; birds; spring vegetables.

Cooking.— Given only as a social industry, and employed by the teacher with the children as the mother in the home might use it. Its special function here is to prepare for a Thanksgiving celebration, making such simple things as grape juice, jelly, and cookies; or Christmas cookies, candy, and popcorn balls.

Rhythm and games.— Simplest skipping, marching, and running; romping games of cat and mouse, skip and hop tag, changing chairs; fall nature games; dramatizing Hallowe'en, Thanksgiving, and Christmas stories. Clouds and snow; trains, street cars; sliding and skating; dramatizing stories selected and planned by the children. Outdoor romping games; growing of seeds; clouds, rain, sun, butterflies; birds and building nests; bees and flowers; dramatizing stories.

Music.— Exercises in tone-placing through plays of steam-car whistles and bells; simple scale songs and exercises; appropriate songs from kindergarten and primary song books by Eleanor Smith, Jessie Gaynor, and Patty and Mildred Hill.

DIVISION B

SECTION 3 (THIRD SCHOOL YEAR)

For the sake of convenience in following a sequence in the different branches, an attempt is made to plan the work under the headings of history, geography, etc. It must be understood, however, that the division is *only* in the outline, since in the children's minds there is no such distinction.

Nature-study.— Autumn Quarter: Landscape work: (1) As a convenient location for daily study, the children of this Section will take the school garden. Here they will note the most obvious autumnal changes — first and last leaves to fall; ways of scattering seeds; departing birds; animal shelters, such as cocoons and nests; seed shelters, such as fruits, grains, and nuts. (2) They will make bi-weekly paintings to show changes in landscape color and bind them in book-form.

Winter Quarter: Landscape work: (1) Observation of the characteristic shape of two or three common trees, such as the willow, elm, oak, etc. (2) Habits of winter birds. (3) Records in painting of winter color.

Applied science: Cooking: Work on evaporation, noting that water is lost in drying fruits and replaced by boiling in water.

Spring Quarter: Landscape work: (1) During constant excursions into the garden and park the children will note the various signs of spring — returning birds, first butterflies, earthworms, budding trees and flowers, bushes and weeds. A large calendar of these events will be made. (2) A record will be made every second week of the spring changes in color.

Applied science: Gardening: Experiments in germination will be made to show a plant's need for heat, light, water, and food. They will lay out a miniature farm, planting the appropriate grains and vegetables.

Cooking: In making candy the children will notice the dissolving sugar and consequent hardening of the thickened liquid.

Geography.—Autumn Quarter: Meteorological observations. (1) Record of sunshine, clouds, rain, frost, and wind. (2) Direction of winds. (3) Reading of thermometer. (4) Noting, in a large way, the shortening days and lengthening nights. In observing the directions of the winds the children will learn and fix the points of the compass by finding out the directions of their homes, the parks, lake, down-town, and various places visited.

Winter Quarter: (1) Continuation of meteorological observations; learn freezing-point of water on the thermometer. (2) In connection with a study of building materials, the children will be able to recognize several minerals, such as limestone, sandstone, and quartz. If possible, they will visit one of the quarries within reach. (3) The consideration of the shelters of peoples of extreme climates will necessarily lead to thinking of their general physical environments. It will be possible for the children to build some picture of the great barren or snowy fields of the polar regions and the luxuriant vegetation of the tropics. The study of Indians will bring to their minds the different types of country which they have seen, grassy prairies or forested hills.

Spring Quarter: (1) Continuation of meteorological records; note lengthening days. (2) We shall visit a farm to see the arrangement of buildings, care of animals and typical spring activities.

History.—During the first two years of the children's school experience, following the Kindergarten, the attempt will be to help them understand the activities around them under the general headings of food, clothing, and shelter. The work for the first year will come largely under the third topic.

Autumn Quarter: The children will be asked to show with building-blocks, stick-laying, and chalk-lines on the floor something of the appearance and plans of their own homes in city or country. They will be asked to make plans for a house that they can make themselves—a small individual playhouse, with only the absolutely necessary rooms, possibly kitchen, bedroom, and living-room. The first models of these houses will be either in paper or light cardboard. As much individual freedom in planning as is consistent with simplicity will be encouraged. During this time they will visit houses and buildings in process of erection, and observe the various kinds of work required. As soon as their plans are sufficiently clear, they will begin the making of their playhouses, using prepared lumber and boxes.

Winter Quarter: Playhouses will be finished. In addition the children will study the various building materials, look into the lumbering industry, and visit a quarry and brick-yard. In order to give a little more color and significance to their thought of their own homes, the building materials and kinds of shelters used in extreme climates will be touched upon—as for instance, the snow houses of the Eskimos and rush huts of the tropics. The shelters and general life of the American Indians will be gone into in more detail. In this connection the children will visit the Field Museum.

Spring Quarter: During this quarter the playhouses will be decorated and furnished. The greatest possible freedom will be given in the selection of materials and making of plans. If time permits, buildings for the sheltering of the various farm animals will be made and placed in the miniature farm in the garden.

Mathematics.—Autumn Quarter: The making of the playhouses requires much excellent number work. Most of the number work is incidental to this making, and it is only when the opportunity seems fitting that certain facts or processes are fixed by special drill. It is hoped that by the end of the quarter the children will have learned to use: (1) all combinations of numbers under 12; (2) units of measure, inch and foot; (3) half inch and half foot; (4) the reading of the thermometer which necessitates counting to 100 by 1's, 2's, and 10's.

Winter Quarter: The cooking in this quarter brings in another kind of number. The children will use most generally the cup as a unit of measure, and will become familiar with one-half, one-third, one-fourth, two-thirds, and three-fourths. They will also learn to tell time in connection with sun-rising and setting.

Spring Quarter: (1) More attention will be given to the writing of numbers and the signs of addition and subtraction. (2) Measuring in feet and yards in garden.

Reading and language.—Autumn Quarter: The children will see constantly words and sentences in connection with their work on the blackboard. Through much repetition they will learn to recognize some words and be able to follow simple written directions. Work in phonics will be begun and carried on throughout the year. They will learn the sounds of all the consonants, and many of the simpler combinations of vowel and consonant, such as *ig, in, et, it, ill,* etc.

Winter Quarter: More stress will be laid on the children's repeating the board work. Recipes and directions will be written and printed in large chart form.

Spring Quarter: The children will begin to read from printed slips and simple readers. They will make and have printed a kind of calendar of the various "signs of spring."

During the year they will dramatize Mother Goose rhymes, fables, "The Three Bears," "Persephone," and "The Sleeping Beauty." They will hear portions of *Hiawatha,* and many short poems from the *Child's Garden of Verse, The Posy Ring,* and Lear's *Nonsense Book.*

Writing and spelling.— Autumn Quarter: The writing of the quarter will be entirely board work, and will consist of words and short sentences and numbers in connection with other work. There will also be much free-hand exercise.

Winter Quarter: Same as Fall, with free-hand exercises extended to paper with large crayons or charcoal.

Spring Quarter: Short records will be kept of cooking and weather observations.

Whatever of spelling there is during this year will be in this reproduction of words written on the board, and in the making of words in phonic drill. It is probable that by the end of the year the children will have mastered the spelling of many of the common words through constant repetition in writing and reading.

Music.— One of the first and principal objects with these children is to train them to *hear* musical tones. They will learn to sing the scale with syllables. They will write the scale and simple scale songs. The seasons, festivals, and general work in the grade will determine the songs to be learned by rote.

Clay-modeling.— Autumn Quarter: During the first months with clay it is the desire chiefly to give the children plenty of experience with a plastic material. They will experiment in making some toy, possibly a pipe for soap-bubbles. Later they will begin some bowl-shaped dishes for Christmas presents. These will be modeled, painted, glazed, and burned.

Drawing, painting, and design.—The work in color will follow the seasonal changes throughout the year. Every other week a landscape picture of the day will be painted and put in the portfolio made for the purpose. Illustrating the history and literature the children will have much big, free work on the blackboard, as well as with charcoal and paints. During the Winter Quarter they will have one period each week on the beginnings of design, emphasizing not so much the selection and making of the units as the repetition and balance which especially please children of this age. These designs will be used chiefly for decoration of portfolios, valentines, and invitations, or luncheon menu cards.

Gymnastics.—The children will have chiefly free gymnastics and recreative games; rhythmic running, skipping, hopping, and jumping; marching in file, by twos and by fours; rhythmic play with bean bags and balls; outdoor games suitable to their age; swinging on ropes, rings, and bars to develop grip muscles.

Manual training.—Autumn Quarter: The children will make individual playhouses, using prepared lumber and boxes whenever possible.

Winter Quarter: This term's work will consist of finishing the playhouses, and making the furniture and decorations for them.

Spring Quarter: For the farm in the garden they will make various buildings for animal shelters, such as barn, sheep-fold, chicken-coop, and pig-sty.

Cooking.—Winter Quarter: (1) Drying of fruit as an introduction to simple work on evaporation. (2) Stewing of dried fruits, replacing water lost by evaporation. (3) Stewing of fresh fruits; cranberry sauce. (4) Comparison of ways of cooking, time in cooking, and flavor of different kinds of apples. (5) Baking potatoes.

Spring Quarter: (1) Making of barley candy, watching the dissolving of the sugar, the thickening of the boiling liquid, and the change of color that takes place. (2) Making candy from maple sugar. (3) Making of lemonade, cocoa, fruit sandwiches, and ice-cream. During the Spring Quarter the children will cook something for their own luncheon, and serve luncheon to themselves and guests once in two weeks.

DIVISION B

SECTION 4 (FOURTH SCHOOL YEAR)

This section shares with all the School the one great problem, namely, to teach children how to live helpfully and joyously in the school community. The final test of the efficiency of the work lies in the reflection of this spirit in the home life of the children.

Morning exercises; care of corridors, garden, and grounds; and interchange of pets, furnish the daily common interest of the entire school. Cooking, literature, plays, and games are of social value in themselves, giving the children material for entertaining. The particular interests of this room will be centered in the questions of (1) how we in Chicago get food and clothing; (2) what the effects of seasonal temperature variation are upon a swamp, lakeshore, and garden; and (3) the making of Christmas presents in the fall, and a garden in the spring.

History.— Stories will be told of how primitive people get food and clothing, handwork will be done, and industrial excursions will be taken, all with the hope of making more simple and intelligible our complex modern methods of supplying these essentials of life.

Fall Quarter: Making toy grocery stores and furnishing them with a variety of foods. To study means by which foods are transported to retail houses, we shall visit a wholesale house, South Water Street, Rush Street docks, and express depot at Englewood Union Depot. Trip recalled by remodeling toy groceries into wholesale houses, with addition of docks, etc. Visits to or descriptions of, sources of food supply: orchards, gardens, fisheries, dairies, etc. The final toy model will be completed to send with the Christmas tree to another group of children. The children will be told, and will read from printed slips, stories of typical primitive people, the Chiquitos of South America, Dakotas of North America, and Eskimos of Greenland. (See "Geography" and "Reading.")

Winter and Spring Quarters: Study of clothing: Experiments with spinning, weaving, and dyeing (see "Textiles"). Dress of primitive people as modified by climate illustrated through dressing of dolls. Stories of shepherd life: Abraham, David. Scotch shepherds and their dogs, Endymion.

First six weeks: Construction by each group of an Eskimo village, one representing a summer, the other a winter scene. Groups will interchange explanations and descriptions of the constructions through oral and written stories and descriptions. Second six weeks: Study of Arabs as typical and picturesque shepherds through stories, reading, and construction of a theater with shifting scenes and puppets for plays. Arabian landscape, costumes, tents and their furnishings, flocks and camels, to be worked out during textile, modeling, and geography time.

Geography.— The geography is another phase of the history during fall and winter, and in the spring divides its time with science.

Autumn Quarter: Lake Michigan as a factor in transportation of foods. Trips to harbor, lighthouse, life-saving station in Jackson Park, and shipyards in South Chicago. On all trips keep general directions in mind. Upon return model in sand, adhering to actual directions therein. Written records where these are profitable.

Winter Quarter: A study of typical northern and southern peoples and their surroundings. The contrast emphasizing pupils' immediate environment. Types chosen: Eskimos and Arabs. Geographic images strengthened and charified by use of pictures, lantern slides, stories, reading lessons, modeling, drawing, and painting. (See "History.")

Spring Quarter: Modeling in sand of areas visited, followed by diagrams on paper. Use of map conventions as to cardinal points. Diagrams will include school and vicinity, Jackson Park, Wooded Island, life-saving station, south shore, Stewart Ridge, Dune Park, harbor and river mouth, South Water Street, and Marshall Field & Co.

Nature-study.—Throughout the year the seasonal changes due to variation in temperature will be watched upon three areas: our garden, which will be the especial tract chosen for this section; a swamp at Stewart Ridge; and the lake beach at south shore. The latter are of sufficiently easy access to be visited once a month. Explanations for the observed changes will be derived from a daily temperature record, noting especially the relation of the temperature curve to the freezing-point. Once a month the temperature will be taken six, twelve, and twenty-four inches underground, to explain hibernation, etc. With the weekly temperature charts and landscapes, together with the monthly summaries of wind and sunshine, a frieze will be made about the room illustrating graphically the seasonal history. The summaries of sun, clouds, and storm will be made with colored strips one inch wide and twenty inches long, so that one square inch will equal one day.

Autumn Quarter: The garden: Gathering of vegetables; how plants store food; use of same as food supply for man. Vegetables stored for spring planting, radishes, cabbages, potatoes, and sugar beets; insect life studied through depredation to the plants; also in various stages of preparation for winter. Swamp at Stewart Ridge: study of typical swamp forms to be transferred to the "water garden" (a cement-lined basin about 2 feet deep and 3′ × 5′, located in the garden). Hibernation of water animals watched here; cocoons, eggs, galls, etc., carefully prepared for observation during winter and spring.

Winter Quarter: Study of soil from swamp, beach, and garden, roughly determining vegetable and mineral matter; origin of each soil which will lead to some study of stones. Individual collections of minerals; these to be enlarged from year to year as children continue through the school. Relative power of these soils to hold heat and moisture. The above tests on soil are to be applied to preparation and selection of soil for garden to be made as early as weather permits.

Spring Quarter: Laying out of the garden. The previous year the children discover the plants' need of heat, light, and moisture; determination more exactly of ranges in amount of these necessities; noting of striking adaptations to meet extreme conditions; visits to sand-dunes; planting of potatoes and the roots of radishes, cabbage, and beets; planting of seeds where absorption of food from seeds is marked; examining of roots of early plants; making drawings of these; examining of roots of late plants; making drawings of these; inferences.

Cooking.—Autumn and Spring Quarters: Gather, grind, parch, and pop sweet corn, pop corn, and field corn. Determine the kind best for each process. Cooking otherwise will be of a purely social nature. Prepare simple dishes, as corn pone, rice pudding, toast, cornstarch pudding, cottage cheese, butter, custard, eggs, salad, sandwiches, and cocoa. Learn to set a table, serve, clear a table, and wash dishes.

Mathematics.—Drill will be given at the time that the need for a fact or process arises. Aim to acquire accuracy and skill in following processes: (1) counting, reading, and writing of figures to 100; (2) recognition of pieces of money; (3) adding of two columns of figures; (4) counting by 2's to 100; (5) adding of simple mixed numbers; (6) use of ½, ¼, ⅓ of one thing and of a few things; (7) use of gram and square inch as units. These principles and relations are involved in actual work to be done as follows: (1), (2), and (3) in keeping of accounts to the amount of $1; (4) in reading thermometer; (5), (6), and (7) in making summaries of sunshine and wind for each month; (6) making of Christmas presents.

Winter Quarter: The above continue through the year, and, in addition, (1) making of plans to a scale; (2) reading and writing of dollars and cents to $2; (3) tables of 2's, 3's, 4's, 6's, and 12's to 24; (4) such addition of three columns of figures as is required in accounting for $2. Actual work involving (2) and (4) is accounts; (1) required in making Eskimo and Arab scenes; (3) used in making mineral boxes.

Spring Quarter: Above continued and construction of square, oblong, right triangle, equilateral triangle, and hexagon will be needed in laying out the garden.

Woodwork.— Autumn Quarter: Toy grocery stores, etc., made in connection with the history work (see above). A Christmas present from the pupil's own initiative to be planned, made, and given away.

Textiles.— Winter and Spring Quarters: First six weeks: Stories of Eskimos, North American Indians, and Chiquitas of South America. Each child will dress a doll to represent one of these peoples. Compare primitive man's limited possibility with our wide possibility of selection of material. Prepare materials for weaving. Send to Washington for silkworms to watch their spinning of cocoons, etc. Second six weeks: Dye and weave rugs, tents, and saddle-bags for Arabian scene (see "History" above). Oriental rugs will be examined, and the children will experiment to produce same weaving effect. "Pulled rugs" of burlap and wool will be made to imitate eastern rugs. Portfolios to hold the writing, drawing, and painting of the year will be made of coarse linen or burlap decorated with cross-stitch.

Drawing, painting, and design.— Free-hand work: Action of figure — use of large washes, and three tones of dark and light are the technical points emphasized in this section. Drawing and painting will be used freely throughout the year to intensify observation, express individual impressions and emotions, and record facts wherever form and color are the prominent features in other subjects.

Design: Winter Quarter: Rhythm; balance; development of symbols; use of two tones in weaving; use of colors of two intensities; application; patterns for textile work given in detail above.

Modeling.— Illustrate stories in low relief; make puppets to be used on the Eskimo and Arabian scenes; these to be baked to make them more durable.

Reading.— Children will read daily from books, printed slips, and script. They will own ***Eskimo Life,*** by Mary E. Smith, and will use from the library ***Lights to Literature; The Blodgett Reader; Around the World,*** by Carroll; ***Heart of Oak Books,*** Vols. I and II; printed slips adapted from authoritative sources, to get information in history, science, or geography; written and printed directions for work.

Writing.— As in the previous year, every effort will be directed toward legibility and freedom of movement. Spelling will be taught through repetition in use of words and by keeping in a "dictionary" lists of words which have been functioned by legitimate use classified under their proper letter. Such a book serves for the children as a means of independent reference, and for the teacher as a record of progress.

English.— This subject will be taught by insistence upon correct speech, through hearing of fine literature and by daily writing as a means of expression. Definite points to be made are: use of period at end of sentence and of abbreviation; use and meaning of question mark; meaning of apostrophe and quotation marks; use of capitals in proper nouns and at the beginning of sentences or of direct address.

Music.— Rote song-singing; writing of simple melodies; analysis of two-, three-, and four-pulse measure; names of lines and spaces; placing of bars; time symbols (whole, half, quarter, and eighth notes); songs for school festivals, seasons, and such as correlate with the history work of the grade.

Physical training.— Incentive to growth and blood formation; plays and games; imitation games, based on sense-perception, and quick decision, as "Adam and Eve had Seven Sons," "Lame Peter." Sack and ball-tossing and catching; outdoor recreation.

DIVISION C

SECTION 5 (FIFTH SCHOOL YEAR)

The basis for the work of the year is the community life of the children. The aim is to present the best conditions for them to gain social experience, and to use this experience for the good of the community. To this end the children will be organized into groups engaged in social activities and studying some phases of the social occupations of the environment.

Activities and occupations which will be carried on during the year are: (1) walks in the park and excursions into the surrounding country; (2) gardening; (3) cooking, baking, preserving; (4) pottery; (5) textiles; (6) woodwork; (7) housekeeping and care of rooms, halls, and grounds; (8) a store, as a distributing point of supplies; (9) celebrations; (10) parties and daily morning exercises.

Subject-matter.—The children will be encouraged to acquire knowledge from every available source in order to carry on these activities in the most effective manner, and also in order to appreciate some of the social activities which they see around them. For this purpose it will be necessary to visit shops, factories, markets, docks, and wharves in the vicinity, where similar occupations are engaged in, and to visit museums and collections of all kinds. It becomes necessary to perform experiments, to use books and pictures for information, as well as objects and specimens from the school museum. Each activity has a scientific and social aspect, both of which will receive due attention. Records of the work will be kept in the form of finished articles, plans, collections of objects studied, written notes, essays, drawings, and paintings.

Nature-study.—The children of the third grade will have a plot of ground in Jackson Park (north end of Wooded Island) which they will count as their own, to which they may go once or twice a week during the fall and spring. Through frequent painting they will study the landscape as a whole. Each child will select one tree for close study throughout the year. He will compare his with those selected by the other children, and learn to distinguish the most common trees in our neighborhood.

Autumn Quarter: Trees: shape, characteristics of bark, leaves. Plants: seeds and their dissemination; how plants come back to us in the spring; a study of annuals, biennials, and perennials. Animals: birds and their habits as found on our chosen plot of ground will form the basis for studying about a dozen of our common birds; flight and structure of bill and claws in relation to food-getting. Insects: life and habits of the bees, ants, butterflies, grasshoppers, and such bugs and beetles as are found in the garden or on excursions. Temperature: a study of some of the causes which produce the particular aspect of nature which is studied; charts showing average temperature for each month will be interpreted by help of the landscape pictures painted during each month; temperature of the earth at the depth at which insects are found will be recorded.

Winter Quarter: Trees: buds: condition in which buds are left to overcome dangers of frost; growth of tree for one year noted. Plants: study of starch (see "Cooking"). Animals: winter condition of animals; hibernation, change in covering, migration, hibernating animals may be watched, such as the frog, snail, and turtle. Visits to the Field Columbian Museum will help in the study of color adaptation to environment and on the whole subject of change in covering. Temperature observed and recorded in the same relation as in the Autumn Quarter.

Spring Quarter: Botany: the tree; returning sap, opening of buds, blossoms. Plants: germination; the relation of the growing plant to soil, water, light, and air. Children will have a garden for vegetables and flowers. They will prepare the soil, plant and care for the garden. Excursions to Beverly Hills and to the north shore for wild flowers. Animals: relation between bird, insect, and plant life. Frogs: the development from eggs to full-grown animal will be watched in the aquarium. We shall have a bee-hive in the garden, which will give the children an opportunity to watch the work of the bees. Other insects, such as the ants and butterflies, will be studied closely.

Applied science.— Autumn Quarter: In relation to drying of fruits and to making of pottery, experiments in evaporation will be performed.

Winter Quarter: The cooking will demand various experiments (see "Cooking"). The history work will call for experiments with metals, which again imply the study of heat. Experiment connected with work in dyeing (see "Textiles").

Spring Quarter: In the preparation of the garden a study of soils will be made; germination, etc. (see "Nature-Study"). The history and geography call for the study of the compass.

History.—Basis (1) on observations of environment of trade; South Water Street; boats and freight cars loading and unloading; stores; children's own desire to barter and exchange; (2) on children's occupations in making boats and carts, and keeping a store for supplies. Beginnings of trade, of exploration, and of travel; development of means of transportation and of a diversity of arts; expansion of industrial, social, and political life. As concrete illustrations of the era of early trade and discovery, some phases of Greek and Norse history have been selected for study.

Autumn Quarter: Geographical conditions which encourage early navigation and commerce — islands, harbors, overproduction of some commodity, desire for other products. Industries and occupations of the early Norse and Greek. Development of trade. How trade was carried on; means of transportation by land and water. Discoveries and expansion of geographical knowledge. The Vikings, their mode of life. Discovery of Iceland, Greenland, and America (Vinland). The Homeric Greek — based on a study of the *Odyssey.*

Winter Quarter: Standards of measurement, currency, use of metals. The children make furnaces, melt metals (lead and tin), make molds, and carry on the whole process of molding in lead and tin. Arrow-points, spear-points, battle-axes, money, weights, etc., are made. Social condition of the people, classes of people, the king, the assembly, games and sports, warfare and warlike conditions; ideals of the time, and religious beliefs.

Spring Quarter: The story of Columbus will be told as embodying the spirit and aims of exploration. For comparison, stories will be told of modern explorers, as Nansen, Livingstone, Stanley; their equipment and aims as compared with those of the ancient explorers.

Geography.— Autumn Quarter: (1) The neighborhood. On all excursions the natural features will be observed. The lake-shore — shore line, bluffs, different kinds of beaches. Beverly Hills — the ravines, brook-basins. Swamps — ridges with trees. (2) Typical environments. Mountain landscapes; Norway and Greece as types; narrow valleys, rapid rivers, falls, lakes; forest-covered, barren, and snow-covered mountains. Coasts: bays, headlands, fjords, islands, harbors. Animal life in the northern forests; animals of the northern seas. Study of such typical environments with relation to their social occupations, fishing — lumbering, hunting, trade. (See "History.")

Winter Quarter: Given typical physiographical features, the children will plan routes of travel by sea and land; construct maps in sand and on blackboard. These maps will first be made to record imaginary trips, and later the journey of the Norsemen to America, the caravan travel through the deserts, Marco Polo's journey, Prince Henry's journeys. Columbus' discovery of America.

Spring Quarter: Picture Arctic scenery with Nansen's journey, and tropical scenes with Livingstone and Stanley. The earth as a ball will be introduced with the study of Columbus, and the different oceans and land masses noticed with relation to one another. The children will construct simple compasses, and learn to use them on their excursions.

Cooking.— Autumn Quarter: Drying of grapes to make raisins; quantitative work on evaporation under different conditions; making of jellies.

Winter Quarter: Preserving of meat and fish by salting, smoking, and drying, to illustrate work in history. Study of starch: starch test; different starch grains seen under the microscope; effect of heat on starch; thickening power of starch as seen in making of white sauce; starch and glutin found in flour; making bread; water, starch, and cellulose obtained from the potato; ways of cooking the potato.

Spring Quarter: Composition of carrots as a type of sweet-juiced vegetable; change of starch to sugar shown by the development of a sweet taste when starchy foods are masticated; classification of vegetables according to their composition into starch, sweet, and strong-juiced vegetables; combining of white sauce and vegetable in the making of cream vegetables and vegetable soups; serving of lunches.

Mathematics.— If the children are actually doing work which has social value, they must gain accurate knowledge of the activities in which they are engaged. They will keep a record of all expenses for materials used in the school, and will do simple bookkeeping in connection with the store which has charge of this material. In cooking, weights and measures will be learned. The children will also keep accounts of the cost of ingredients.

Proportions will be worked out in the cooking recipes. When the children dramatize the life of the trader, in connection with history, they have opportunities to use all standards of measurements. Number is demanded in almost all experimental science work; for instance, the amount of water contained in the different kinds of fruits, or the amount of water evaporated from fruits under different conditions (in drying fruits). All plans for woodwork will be worked to a scale and demand use of fractions. When the children have encountered many problems which they must solve in order to proceed with their work, they are ready to be drilled on the processes involved until they gain facility in the use of these. The children should be able to think through the problems which arise in their daily work, and have automatic use of easy numbers, addition, subtraction, multiplication, short division, and easy fractions.

English.— Literature: The children will be told several Norse sagas of the Vikings; stories from the saga of King Harold the Fair-Haired, and the Volsunga saga; the *Odyssey,* parts read by children from Palmer's translation, parts read or told by the teacher; Norse myths: "Thor's Journey to Jotunheim," "The Death of Balder," "The Gift of the Dwarfs;" Greek myths: "Apollo and the Python," "Athena and Perseus," "Hermes and the Cave of Winds;" fairy-tales to be told to the children: "The Land East of the Sun and West of the Moon," "The Seven Swans."

Oral reading.— Poems will be studied with a view to rendering them in a beautiful way to others: "Dark Brown is the River," "Windy Nights," "The Shadow," "The Lamplighter," by Robert Louis Stevenson. The children will dramatize scenes from the *Odyssey* and from the Volsunga saga: also many of Æsop's *Fables.*

Reading.— For some of the children considerable phonic drills and reading of very simple stories will be necessary. Others will use silent reading mainly for study in science, history, and geography, oral reading being used only for social purposes. At the end of the fifth year in school (counting two years in the kindergarten) the children should have acquired ease in reading whatever thought-matter is adapted to them, and in giving an intelligent oral rendering of the same.

Writing.— The children will have many opportunities to feel the need of writing, which will cause them to use it for reasons which they themselves will think valid. Written expression will be used in the following instances: (1) note-taking (*a*) while experimenting, (*b*) while on excursions, (*c*) while studying books; (2) notes written up to present to the class; (3) dictation: (*a*) recipes for cooking, (*b*) directions for experiments; (4) original stories and verses; (5) invitations, letters; (6) to give direction for work to other children. In writing, the pupil needs many words which he cannot spell. The teacher writes them on the blackboard, or the child looks them up in his "dictionary"—a notebook in which each child writes the words he has misspelled or asked for in previous lessons. This dictionary, consisting of words which the child actually needs and uses constantly, will become a spelling-book, if so it may be called, the children often taking it home to learn the words. When a paper is read aloud and the class does not gain the thought which the writer desires to convey, a reconstruction of the language may be necessary. Certain rules of grammar will be given. The use of punctuation marks is discovered, and rules for the use of capitals, etc., are established.

Woodwork.— Autumn Quarter: Toy boats, carts, bridges. For Christmas gifts: library furnishings—calendar stands, thermometer stands, ink-stand and pen-tray, envelope-opener and paper-cutter, blotting-pads, etc., book-racks, small waste-paper baskets. Free choice is given to the children with regard to articles made, kind of wood, and design.

Spring Quarter: Desk furnishings for the school, repeating some of the pieces made during the Autumn Quarter to leave as gifts for each teacher's desk.

Textiles.— Autumn Quarter: Use of grasses, twigs, leaves, corn husks, and other primitive fibers in the making of baskets and mats; sewing of bags for school purposes.

Winter Quarter: Experimenting with the weaving, braiding, and sewing processes, and application of design so discovered in the making of bags of jute; dyeing of the jute fibers with vegetable colors; preparation of flax fiber; spinning.

Clay-modeling.— Jars and trays for Christmas presents. Study where clay comes from; uses of clay; effect of heat on clay.

Painting and drawing.— Successive paintings of the landscape as a whole, trees, animals, etc., where color or outline demand study. Scenes illustrative of Norse and Greek life. Characteristic scenery of Norway and Greece. Stories and fairy-tales illustrated. Design applied to pottery, woodwork, book-covers, and textiles. Spacing, rhythm, balance. Three hues of dark and light. Color: two intensities. Method: unconscious exercise of these principles.

Music.— Rote song-singing; sight-reading exercises in two-, three-, and four-pulse; notes and rests; simple melodies written; six-pulse rhythm analyses; original songs; songs composed by the children during the past year; songs to be learned during the year.

Gymnastics and dancing.— Special attention to carriage and poise of body. The exercises and games are such as to require finer co-ordinations. Marching: (1) by file; (2) by column; (3) sideways, forward, march to command. Apparatus: traveling on horizontal beams, bars and ladders (never to the point of fatigue); jumping (height). Plays and games: to lower reaction time between definite sense-perceptions and definite action; example: "White and Black," "Plump Sack."

DIVISION C

SECTION 6 (SIXTH SCHOOL YEAR)

During the previous years the children have been getting acquainted with their environment and know, to a certain extent, what the prominent features are; but the important characteristic movement — change — has not been emphasized. In the fourth grade the children study the growth of Chicago, not as a closed book, but as an interesting progressive drama worthy of close attention. It is necessary (1) to continue the observation of natural phenomena with the problem of adaptation of structure to environment; (2) that a study of the present physiographic condition be made, for Chicago illustrates man's struggle.

Nature-study.— Autumn Quarter: I. Field work: The excursions will form one of the basic points for the study of Chicago: (*a*) Wooded Island visited weekly; (*b*) south shore; (*c*) north shore at Glencoe; (*d*) neighboring swamps; (*e*) Beverly Hills. Special points: (1) Comparative study of plant life: (*a*) identification of known species; (*b*) recognition of new species; (*c*) note especially: (1) where found, i. e., the nature of soil; (2) mode of growth — reason for it; (*d*) dissemination of seeds. (2) Animal life: (*a*) bird life; identify and study habits; keep chart showing migration; (*b*) insect life: insect injuries, cocoons, etc.

II. Weather-record: Special points: (1) Slant of sun's rays; measurement taken weekly by skiameter. (2) Average temperature: daily record taken at 9, 11, and 1 o'clock. (3) Direction of wind at same time; relation of direction of wind and slant of sun's rays to temperature.

III. (1) Planting of bulbs for spring and winter blooming; (2) filling window-boxes; (3) gathering products of garden.

Applied science (see "Woodwork").

Winter Quarter: (1) Weather records: continue autumn observations and landscape work. (2) Winter birds: source of food. (3) Buds: mode of protection. (4) Twigs of common trees: (*a*) comparative growth of several seasons; (*b*) protection from frost.

Applied science:

I. Prehension of food: (1) comparison of prehensile organs; (2) nature of food; (3) way of obtaining it.

II. (1) Examination of systems of heating and ventilation; relation of volume of fresh air to volume of air to be heated and kept pure; experiments showing the effect of poor ventilation on air. (2) Heat: experiments showing (*a*) expansion, (*b*) radiation, (*c*) conduction.

III. See "Cooking" and "Metal."

Spring Quarter: (1) Charts showing (*a*) return of birds; (*b*) opening of buds; (*c*) insect life; (*d*) flowers. (2) Excursion to (*a*) Wooded Island weekly; (*b*) south shore; (*c*) Beverly Hills; (*d*) Dune Park; (*e*) Fraction Run; continue autumn observations. (3) Prepare and plant garden. (4) Perform experiments to account for character of growth in different areas: (*a*) the relation of light and heat to growth under perfectly natural conditions; (*b*) germination and rate of growth in various soils, conditions similar; (*c*) effect of roots on rock; (*d*) way of taking moisture; (*e*) relation of moisture to growth of roots.

Applied science.—See "Woodwork" and "Textiles."

Geography.—Autumn Quarter: I. First six weeks: Special point: agencies which change topography. Excursions to (1) South shore: (*a*) formation of sand bars, lagoons, swamps, and ridges; (*b*) reason for piers; (2) Glencoe: (*a*) formation of cliffs and ravines; (*b*) river-action; (*c*) character of beach; (*d*) piers; (3) swamps: conditions for formation and change; (4) Dune Park: (*a*) formation of dunes and swamps; (*b*) cause of succession of dunes; (5) Beverly Hills: Special features—forests, wide ravines, swamps, and prairies.

II. In connection with history: (1) The St. Lawrence and Mississippi basins; (2) Geography and topography of Illinois: (*a*) the old river routes; (*b*) appearance of the country; (*c*) routes to the East.

III. Second six weeks: Lumbering (see "Woodwork").

Winter Quarter: (1) History: St. Lawrence and Mississippi basins, with special emphasis on the Ohio basin; (2) mining (see "Metal").

Spring Quarter: (1) Excursions: Special point—ravines: (*a*) Thornton; (*b*) Beverly Hills; (*c*) Fraction Run; (2) typical river basins; (3) industrial study of Mississippi basin: (*a*) relation of topography and climate to the industries; (*b*) location of (1) cotton belt, (2) mining regions, (3) food belts of all kinds, (4) forests, etc.

History (see *Elementary School Teacher* for May, 1905, for fuller outline.)—Having studied in the earlier years some of the conditions that bring people together in a city, in the sixth year we trace the growth and development of our own city. The approach to the study of Chicago is through the consideration of the French explorers and early settlers of the Northwest.

Autumn Quarter: I, (1) Early French settlers: their motives, religion, adventure or acquisition of territory; (2) industries naturally developed on the St. Lawrence; fishing, fur-trading, and trapping; (3) story of Marquette and Joliet. II. Clay-modeling: history of the development of pottery.

Winter Quarter: I. Story of La Salle in his attempts to establish a chain of forts in the country south of the Great Lakes, and to control the fur-trade. Development of trading-posts at Kaskaskia, Detroit, Vincennes, and Fort Dearborn. Special study—Fort Dearborn: (1) development of trading-post; (2) building of fort; (3) coming of pioneers; (4) growth of village. Construction work: a model of Fort Dearborn.

II. History of the age of metal.

Spring Quarter: Civics: In the evolution of Chicago the problems especially considered are: (1) streets and bridges; (2) water-supply; (3) drainage; (4) illumination; (5) government.

Mathematics.—In the correlation necessary to the general work, the following should be the outcome in arithmetical knowledge: (1) familiarity with the use of the multiplication tables through the 12's; (2) dry and liquid measure in connection with cooking; (3) linear, square, and cubic measures in the study of ventilation; (4) simple fractions and decimals with nature-study, manual training and cooking; (5) ability to add, subtract, multiply, and divide whole numbers, as rapidly as is consistent with the general development of the individual; (6) keeping simple accounts.

Reading.—The reading may be classified under two divisions:

I. Reading: (1) Information; i. e., *Heroes of the Middle West,* by Catherwood; *The Discovery of the Old North-west,* by Baldwin; *History of Chicago,* by Jennie Hall; *Stories of Industry,* etc. (2) Pleasure; i. e., fairy-tales, poems, *Jungle Book, Robin Hood, Siegfried,* etc.

II. Special, oral reading, and dramatic art: (1) dramatization of a part in the celebration of the yearly festivals. (2) Study of a group of celebrated horse-back rides in literature: (*a*) "John Gilpin's Ride;" (*b*) "How the Good News Was Carried from Ghent to Aix;" (*c*) "Sheridan's Ride;" (*d*) "Paul Revere's Ride." (3) Other poems and dramatic stories which develop the power to express intelligently the reader's interpretation of the author's meaning.

English.— Writing: The demands for writing are constant. Papers will be written for (1) records of (*a*) science work, (*b*) excursions, (*c*) cooking; (2) stories; (3) letters; (4) invitations; (5) expense accounts; (6) songs. The skill to be acquired through this demand is: correct use of capitals, periods, interrogation point, and quotation marks; the use of the apostrophe; some uses of the comma; simple paragraphing. Spelling: The plan suggested in the third grade is followed.

French.— Stories illustrating manner of living, customs, and festivals in France. Reading and playing: (1) dramatic anecdotes arranged by the fifth grade; (2) *Les souliers d'enfants,* child's French classic. Christmas work: writing, illustrating, and binding a story, song, or game. Much material will be taken from *Jeux, chansons et rondes populaire de France.*

German.— Instruction mostly oral; no textbook; no grammar taught. The children will learn a great many games, rhymes, riddles, songs, dialogues, names of familiar objects and actions. Conversation about pictures and stories.

Drawing and painting.— (1) Landscape: (*a*) Immediate landscape, showing weekly change; (*b*) typical areas visited. (2) Trees and plants — from these areas. (3) Illustrative work in history, etc. The technique is constantly improved, or there is dissatisfaction with the work.

Modeling.— Autumn Quarter: (1) Pottery, i. e., vases, jars, tiles, etc. (2) Tiles illustrating a scene in high relief from literature, etc. Excursions: Marshall Field's, and Burley's to pottery exhibits; Art Institute; Teco Pottery at Terra Cotta.

Winter Quarter: (1) In connection with prehension of food, each child will model some animal in the round. (2) Tiles for window-boxes, the frames being made of copper or wood. (3) Jardinieres for the school.

Spring Quarter: The children will continue to model animals and illustrations on a large scale.

Woodwork.—Autumn Quarter: (1) Desk-boxes, fern-stands, doll furniture, etc., for Christmas presents, made from hard wood, in which the child meets the same problems of previous years. (2) A hot-bed frame. *Applied science:* a collection of woods representing the trees of the environment will be cut and polished to show graining. Geography: lumbering—(1) location of the great forests of the world; (2) life of the people; (3) preparation of wood for use. Excursions: Tobey's furniture store; Pullman car shops, Lyon & Healy's piano factory.

Spring Quarter: An oak screen; window boxes. *Applied science:* the tests for strength and elasticity of the familiar woods. Excursion: Field Columbian Museum to verify same tests.

Cooking.—Winter Quarter: (1) Sugar: kinds: where obtained; how manufactured; wide distribution in food; use in preserving fruit; canning. (2) Albumen: (*a*) solubility; (*b*) coagulation by heat; (*c*) cooking temperature; (*d*) comparison of its thickening power with that of starch and sugar. (3) Combination of white sauce and egg in boiled salad-dressing; cooking eggs, meat, and making meat soups. (4) Milk and its products; separation of fat from milk in making butter; action of acids and rennet on milk; study of curd in making cheese; comparison of curd with albumen; effect of high temperature.

Metalwork.—Winter Quarter: The fifth section has studied the use of metal in the beginnings of trade and barter. In the sixth section it is taken up as a material in which the children can express themselves socially and artistically. They will hammer from sheet copper such articles as bowls, trays, etc. *Science:* simple experiments in smelting. *Geography:* the source of the ores; location of mines; the life of the miner; preparation of metal for use.

Spring Quarter: The introduction of articles which call for different processes, as sawing, etc.; the application of decoration in (1) etching, (2) pierced work, (3) chasing.

Design.— Winter Quarter: The crafts in which the children engage form the basis of the design. The technical emphasis will be placed on the following points: form, proportion, and spacing; the decoration of the rectangle and the circle; straight lines and simple units used in borders.

Textiles (sewing).— Spring Quarter: Making pin-cushions, dust-cloths and bags; use of scissors; cutting straight edges and square corners; basting, running-stitch, and back-stitch, hemming and joining tape; button-hole stitch; feather-stitch; beginning of machine sewing. Beginning study of fabrics; selection of materal for dust-cloth and bag; comparison of warp and filling threads; printed patterns and woven; tests for cotton, linen, wool, and silk. Special study of cotton plant, fiber, and fabric. Designing of bag, cutting, and use of pattern. Dyeing embroidery thread.

Music.— Rote song-singing; preparation for two-part singing; rounds; sight-reading exercises in various measure-rhythms with special emphasis on time problems; melodies written; original songs notated in blank books; rules for finding keynotes.

Gymnastics.— Special attention is here given to the development of carriage and poise. The exercises are such as to require finer co-ordination, thus differentiating the use of the finer muscles. Marching: (1) by file; (2) by column; (3) sideways, forward, march to command. *Apparatus:* (1) traveling on horizontal beams, bars, and ladders; (2) jumping (height); (3) jumping (broad). Plays and games: to lower reaction time between definite sense-perception and definite actions; example: "White and Black," "Plump Sack," "Ball Games," "Outdoor Recreation." Dancing.

DIVISION D

SECTION 7 (SEVENTH SCHOOL YEAR)

The work of the seventh school year will aim to give the child a large and general outlook upon his own country, by leading him to inquire into the causes and development of many of the phenomena about him.

Geography.— Geography will be closely allied with history. In the Autumn Quarter the history will be the Massachusetts settlements. By the use of pictures and descriptions, the class will study the soil, rivers, forests, hills, boulders, water-power, and climate of New England in their relation to the chief industries, manufacturing, fishing, and agriculture. The cause of the rocky soil will lead to a study of the glacial drift which covers all New England, and excursions will be made to Stony Island, where glacial marks and boulders can be seen, and the conditions will be applied to Massachusetts. The cause of the lakes, waterfalls, and general topography may also be traced to glacial action, and it will be seen that the location of many towns and cities has been determined by the available water-power.

Winter Quarter: The work will be North America as a continent. The study will begin with the area about Chicago— surface, soil, and industries. By the use of books and pictures, other sections of the continent will be studied, as the cotton belt, wheat and corn areas, mining regions, forest tracts, and prairie lands. Different sections of the country will be chosen by groups of children, who will work out characteristic occupations of each area, and later present to the class the result of their investigation. Visits will be made to industrial plants in or near the city, which will make clearer the work of the class. The work will necessarily include the study of the two principal highlands, the great central plain, and the principal river systems. Variations in the climate of the continent, and causes for the differences, will be considered.

Spring Quarter: A special study of the Hudson and Mohawk Rivers as an outlet for the lake region and middle West. The building of the Erie Canal, and the fine harbor of New York, will show causes of New York's greatness and importance. The story of the building of the transcontinental lines of railway will show the character of the country. Several of the largest cities of the continent will be located, and causes for location and growth noted. In the work on New York history constant reference is made to Holland, and, in order to make it more vivid, the general geography of Holland, including the subjects of erosion, formation of islands, and transportation of soil, will be studied. During the entire year current geography will have an important place in the curriculum, and a period each week will be devoted to current events.

Nature-study.—The work in nature-study will aim to stimulate a spirit of inquiry as to the cause of present conditions, not only why certain things exist as they are, but why they are not otherwise. For much of the work, Wooded Island in Jackson Park will be studied as an area typifying larger growth and broader conditions, and the principles found there can be applied to other areas. Study and record meteorological conditions affecting the chosen area.

Autumn Quarter: Work will deal largely with out-of-door phenomena, with plants, animals, seasonal changes, and their relations to each other. Changes taking place in length of day, temperatures, amount of moisture in air; i. e., general change from summer to winter. Record these changes. Effect of seasonal changes upon animals and plants. Study of plants—annuals and perennials, including trees, shrubs, leaf-bud. Preparation of animals for change of season. What animals migrate? hibernate? burrow deep into the earth? What becomes of bees, worms, frogs, toads, ants and various other insects which appear in large numbers in the spring? How will the rabbits, squirrels, and fishes spend the winter? The children will be encouraged to discover answers to these questions.

Winter Quarter: A series of experiments suggested by the present life and experiences of the children. In work on modern conditions they seek the origin and development of changes which have taken place. The work is done with materials available to early settlers; the children work out some of the problems involved in reaching present conditions.

Soap-making: Leach lye from wood ashes, test properties, let it combine with oil to form soap. Value of different fats and common oil (suet, olive oil, scraps of fat from kitchen) in making soap determined by trial. The class will make hard soap by using caustic soda, and soft soap by using caustic potash. Visit soap factory.

Candles: The class will work out conditions under which oils and fats burn, and study different kinds of wicks as to volatilization of oil. Candles made of tallow and paraffin. Use of chimney. Study of convection currents. Discover need of oxygen and production of carbonic acid gas.

Pewter: Experiments in melting and mixing lead and tin in different proportions to make an alloy suitable for dishes. The children will originate methods, as far as possible, and perform experiments independently. Apparatus simple and largely made by children. Committees prepare exhibits of industries for museum.

Spring Quarter: Excursions to various places. Comparisons of changes observed in plants during fall and spring. Aquatic life taken into the schoolroom and closely watched. Record changes by writing, drawing, and painting. Collect plants for a wild-flower garden. At the places visited, the children will observe conditions of light, heat, moisture, and exposure under which plants grow, in order to approximate these conditions in their garden. The children will make a hot-bed. This involves a study of the principles of a hot-bed — heat generated by decaying matter, radiant energy changed to heat, south-sloping glass top, air space between double walls.

History.— Colonial history is chosen because it illustrates the dependence of man upon a definite geographic region. The conditions are simple, and give rise to problems which the children can make their own. The energy and industry of the colonists make this a period useful in forming ideals of character.

Autumn Quarter: Study of the Pilgrims. After the story of the Pilgrims in England and Holland, and the coming of the "Mayflower," pictures of the country around Plymouth will be shown, and the children will discover why the colonists chose that place for their home. Plymouth Harbor will be modeled in sand, and the town constructed on the sand-table, including Governor Bradford's house, the fort, the town brook, Leyden Street, Priscilla's home, and Burial Hill. The story will continue with Governor Bradford's "Journal" as a basis. The study of the New England home will include the houses and furniture, fireplace and furnishings, preparing and serving meals, spinning, dyeing, weaving, and making candles and soap. During the study of Pilgrim life Longfellow's "Courtship of Miles Standish" will be read.

Winter Quarter: The study of Virginia colony begins with the plantation as contrasted with a New England farm. After describing the large farm, with its great fields of tobacco, many laborers, mansion house, river, wharf, and the ship from England with its freight of manufactured articles, the causes for the difference between the life in Virginia and New England will be seen. This will lead to the reasons for the introduction of slave labor, and the effects upon later history will be very simply traced. The causes of the colony and events connected with the history of its founding will be studied.

Spring Quarter: The work will be the study of New York. Hans Brinker furnishes a vivid picture of life in Holland, and the siege of Leyden illustrates the character of the people. After the story of Henry Hudson, maps will aid in seeing the commercial importance of the location secured by the Dutch in America. The characteristics of the colony will be studied and compared with those of New England and Virginia: occupations, classes of society, labor, education, government. A miniature New Amsterdam on the sand-table, and drawing of scenes in old New York, will illustrate the work. The *Legends of Sleepy Hollow* and *Rip Van Winkle* will be read, and the latter dramatized by the class.

Mathematics.—The number work of the year will be correlated with other studies. The four fundamental processes will be given special attention, and simple problems performed in fractions, both common and decimal. Averaging temperatures—long division; material for hot-bed—linear and square measure; garden—linear and square measure; material for looms and Christmas gifts—linear and square measure; recipes—addition, subtraction, multiplication, and division of fractions; dye for textiles—fractions and metric weights; supplies for school use; United States money; working-drawings; proportion.

Textiles.—The work in textiles will be a general outlook upon the different materials used in the making of clothing, including the manner of production and preparation for use.

Autumn Quarter: The children will make Christmas gifts upon linen and hand-frames, of small bags, mats, or doilies, using cross-stitch in design where practicable.

Winter Quarter: The class will make a study of different fibers used in weaving, spin wool and flax on spindle and wheel, and study the processes used in weaving and dyeing employed by the early American colonists.

Spring Quarter: Before making rag rug, the children will work out their design, prepare and dye the material, and study the construction of the loom.

Cooking.—The work in cooking will follow closely the dishes used by the colonists, and, as far as possible, will be prepared with the limited means available to early settlers. Autumn Quarter: Canning and drying of fruit for winter use; preparation of dishes used by Pilgrims. Hulled corn, hasty pudding, brown bread, baked beans, cranberry jelly, and some typical southern colonial dishes will be cooked. Corn used will be ground by the children. A fireplace equipped with hanging crane will give opportunity for cooking over open fire. Vinegar made from apples, and study of acids and alkalies begun; visit to a vinegar factory. In connection with geography, cooking will include different ways of preparing cereals; value as a food; distribution; best conditions for growth; milling; visit to flourmill and bakery. A colonial luncheon will be served at Thanksgiving.

Manual training.—The use of woodworking is especially to reinforce class work, so far as correlation seems necessary and practical, and the work should be done with considerable skill. Autumn Quarter: Christmas gifts, hot-bed, loom, horn-book. Winter Quarter: plantation house typical of Virginia home; apparatus for experiments in science. Spring Quarter: some article for use at school or at home.

Oral reading and English.—The reading for the year will be chosen to supplement the work of the other classes. The literature will be poems of nature selected from Whittier, Bryant, Wordsworth, and other poets, Longfellow's "Courtship of Miles

Standish," Tennyson's "Revenge," Irving's *Rip Van Winkle* and *Legends of Sleepy Hollow*. *Rip Van Winkle* will be dramatized by the pupils and put upon the stage at one of the morning exercise periods. By means of written lessons in cooking, geography, and science, it is expected that the class will gain a free and correct use of English. Attention will be given to paragraphing, punctuation, and the principal parts of the sentence.

French.— Imaginary trip to northern France; dramatizing and illustrating for the fourth grade of stories and anecdotes relating to this trip; illustrations to be original drawings made by pupils; photographs and postal cards; reading of *Historical and Literary Cook Book* made by the seventh grade (based on *Le grand dictionnaire de cuisine*, by Alexander Dumas); playing of games and singing of songs and rounds taken from *Jeux, chansons et rondes populaires de France.*

German.—This grade uses Foster's *Geschichten und Märchen.* The children read and retell the stories, and learn to ask and to answer questions about them. Conversation about different subjects, if possible connecting science or history with the German. This class will learn to write German phonetically. Grammar: singular and plural of nouns.

Drawing, painting, and design.— The art for the year will fall into two divisions: expression work and design. The former will include records of excursions, nature-study, seasonal changes, and illustrations of work in geography, history, and literature. The work in design will involve the study of the fundamental principles of design as applied to the work in manual training and textiles. The principles of color will be consciously studied; i. e., use of complementary colors, and harmonies in tone and hue.

Music.— Songs read; a few rote songs; two-part songs; scale structure; signatures; original songs notated; writing of phrases selected from school songs. During the Autumn Quarter (1904) the children composed a song about the "Oak Tree." They had been studying oak trees in the vicinity of the school building and wished to write a song about it. The result was the composite work of the entire class.

Physical training.— Further improvement of volitional control through problems in new co-ordinations in free and apparatus work. Attention to posture. Special adaptation of running, vaulting, and jumping exercises to moderately increased demands. Preference for more active running games. Marching: (*a*) by file; (*b*) by column; (*c*) with change of space relation; (*d*) Wheeling (from place and marching positions). Apparatus: hanging on beams, ropes, rings, with leg and trunk exercises; climbing; high and broad jumping.

DIVISION D

SECTION 8 (EIGHTH SCHOOL YEAR)

The children are reaching out beyond the home to the business world. They do shopping. They are interested in their father's business, in values, and in commercial problems in general. The alien peoples around them have a meaning beyond mere contact. They are anxious to enter into geography and history of other countries to answer the questions that arise in the great city life around them. They are beginning to organize their æsthetic, and artistic tastes.

Geography.— Autumn Quarter: Eurasia; its relation to us through peoples represented here; means of communication with us; products known to us; our commercial relations; direction from us; latitude. Physical features: great mountain system, slopes, special study of mountains and glaciers (visit to Stony Island for glacier study). Tundras, forest belt, steppes, desert belt, characteristic product of each, effect of each on human life. Great regions of wheat, flax, mulberry, grape, grazing, lumbering, mining, manufacturing. A general picture of the great continent.

Winter Quarter: Europe: Topography, climate, industries. Great regions, as above; special study of the vine and its products; the olive culture; flax — growth, preparation, and manufacture — in Russia, Great Britain, France, Germany, and Belgium. The cork-oak and its products (visit cork exhibit at Field Museum). Mines; coal, iron, oil in western Europe and Russia; variety of minerals in other countries. A study of silk is made in this quarter and carried into the next quarter. Transportation; special features, tunnels, and canals of France and Russia, and the great Kiel Canal. Southern and western Europe — great coast line, seafaring people, early discoverers and early explorers of the New World. Our commercial relations with Europe.

Spring Quarter: Asia: The same plan as for the winter work. The Russian-Japanese war, its cause and progress, will receive attention.

Chalk models, sand models, and maps, and drawing and painting are an integral part of the work.

Tarr and McMurry's books, Adams' *Commercial Geography,* Mill's *International Geography,* Carpenter's books, and *Modern Europe* will be used.

Nature-study.— Fall Quarter: I. *Landscape work:* Materials for work found in the area at the east end of the Midway; the outlook widened by excursions to Wooded Island and Beverly Hills. The change of seasons and its cause is the underlying thought of the year's work, observation and investigation being made through entire year. In this quarter observe the length of day, the course of the sun in the sky, the variation in heat and light, the records on charts and models; observe the effect on plant and animal life. Special study of bulbs; prepare tulip beds for the winter, plant bulbs for early indoor blooming. Study of runners; transplant and prepare strawberries for the winter. Preparation of animals for the winter. Cause of variation in heat and light; course of the earth around the sun; rotation on axis; angle of axis to orbit; use of sun-dial and skiameter.

II. *Applied science:* Cooking; study of fermentation; experiments in various ways of preserving; yeast, effect of temperature on it; products of fermentation; change of alcohol into acetic acid in making vinegar; experiments with baking-powder.

Winter Quarter: I. *Landscape work:* Change of seasons continued; weather charts; models showing course of sun; excursions to Wooded Island and Beverly Hills; lists of old birds' nests; animal tracks studied; preparation for the return of birds; making houses; preparing calendars, and aquaria for pond life.

II. *Applied science:* Cooking: Continued from the Autumn Quarter. Modeling: Making bird-houses. Mechanics: Study of simple machines in use at the school, at home, in stores, on streets; look for universal principles in machines; find lever in its many phases; construction of simple machines.

Spring Quarter: I. *Landscape work:* Study return of life in areas chosen; animal, bird, and flower calendars; plants—those in water, mud; those clinging close to ground; shrub, tree; problem each has to solve, and how it solves it. The bud is of special interest. Arbor and Bird Day is a feature of this quarter's work. Animals: Pond life in aquaria; life-history of frog in detail, material in pond at Beverly Hills.

II. *Applied science:* Garden—study of fertilization of flowers (through strawberry) and fertilization of soil.

Æsthetics.—Beauty of seasons, special attention to beauty of sky; paintings showing changes, sunsets, sunrises, color and form in nature; paintings mounted showing changes (weekly). Music: Songs of the birds, original songs about birds, listening to music about birds. Literature: Burroughs, *Winter Sunshine, Signs and Seasons;* Thoreau, Darwin, Riley, Lowell, Bryant, Whittier, Warner, (given more in detail under "English;" written work given under English also). Mathematics: work in connection with course of earth around sun. (Given in detail under "Mathematics.")

History.—Fall Quarter: The French in America; conditions, geographical, social, and political, that led to their coming; establishment of great fishing industries in the New World; follow Cartier along the St. Lawrence to Stadaconé and Hochelaga; fur-trade monopoly; De Monts, Champlain, and Pontrincourt in Nova Scotia; Champlain on the St. Lawrence; founding of Quebec and Montreal; summer fairs at Three Rivers, Quebec, and Montreal; trapper, soldier, explorer, missionary; churches and schools, seigniorage; spread into Great Lake region and Mississippi Valley; settlement of the valley; alarming the English. Comparison of life of French and English colonists; account for difference in ideas of government. French and Indian War; importance of result. Champlain's *Journal,* Parkman, Bourinot's

Canada, Baldwin's *Discovery of the Northwest,* and Louisiana Historical Society Papers are used; Mr. Catherwood's stories are read.

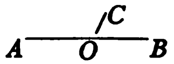
Winter Quarter: Growth of the English colonies — industrial development, home, hand manufacture, improvement in machines, growth into factory system; increase in agriculture, manufacture and commerce, lumbering, shipbuilding, manufacture of barrels, paper, linen, etc., trade with West Indies and Europe; Navigation Acts. The newspapers of the day can be consulted to show the kind and extent of the trade. Enforcing the Navigation Acts and taxation lead to the Revolution; result; the birth of nation.

Spring Quarter: Study the work of the civic improvement societies of our city; how to make our city beautiful. Take Athens as typical beautiful city. Greek history — education, games, music, art; their struggle for liberty as a parallel to that of the colonies just studied. The story of the *Iliad* is used as the foundation of this work.

Sand-modeling, map-drawing, clay-modeling, and painting help the work throughout the year. Woodwork and metal-work help in some phases of the work.

Mathematics.— Autumn Quarter: How business is done, business problems, values, individual, and co-operative buying; cost of window-boxes and bulbs for fall planting; percentage saved by buying in large quantities; percentage in simple business problems and science; use of common and decimal fractions; geographic problems, scientific and commercial; mensuration: areas of rectangle, parallelogram, trapezoid, hexagon, octagon; areas of and perimeters of flower-beds; drawing to a scale; estimating sizes and values; checking, or proving results; problems in variation of sunshine.

Winter Quarter: Problems of the Autumn Quarter continued. Circle, radius, etc.; ellipse, foci; horizontal, vertical, perpendicular lines; parallel lines and circles; angle; means of measuring angles, degree, use of compass and protractor. This work is done in connection with change of seasons, revolution of the earth around the sun. Generalized number; formal statement of principles; mathematical language; equation. This i emphasized in the study of machines, as, the law of the leve $P \times PA = W \times W A$, and in the study of angles



$CO\,B = 50°$
$CO\,A = 180° - 50°$
$CO\,A = 130°$

Spring Quarter: Work of the Autumn and Winter Quarter continued.

Modern languages.— English: Descriptions, narrations, an character sketches are written in history, geography, literatur and nature-study in prose, but occasionally in verse. The result aimed at are: a desire to express, a power to express clearly an beautifully what one has to tell, and on the formal side, control i writing, spelling, capitalization, punctuation, and an insight int the law underlying each. Letters will be written — correspondence with a Boston school. Records of observations on experiments — recipes in cooking are written.

French.— Original play — *French Explorers in America* — written and presented by the pupils; costumes and stage-settin to be the original work of the pupils, with the help of the art an textile departments; reading of *Historical and Literary Coo Book;* writing, illustrating, and binding of Christmas pla *La veille de Noël dans midi de la France (Dramatic Frenc Reader);* reading lessons and grammar taken from the *Dramati French Reader.*

German.— Complete story-book begun in the seventh scho year; Guerber's *Märchen* and *Erzählungen,* Vol. I; method th same as in the previous year; dictation work increases; subject for conversation from science, history, and geography, etc. games, songs, etc.; presentation of a Christmas play; gramma — connection of certain forms of verbs with certain persons i present tense; some forms of strong verbs learned in the impe fect; use of genitive.

Reading.— Aim: to interpret readily the printed page, t acquire use of dictionary, and secure choice of definition; writin and dramatization of a story of colonial life just before the Rev lution; reading of "Paul Revere's Ride," Whittier's "Fishe men," Burrough's "The Apple," parts of his "Signs and Seasons," and "Wake Robin," parts of Thoreau's *Excursions;* Riley's "Dream of Autumn," and other poems of the seasons; tree-myths.

Writing.— Writing is part of the work in every subject; the aim is for legibility and ease; the pen is used except for taking notes.

Spelling.— Oral and written, of words used; some attention to laws, as, doubling final consonant, changing *y* to *i,* and adding *e,* etc.

Drawing and painting.— Landscape, weekly, to show change in nature; history, geography, and literature call for expression in pencil and color. Compositions worked out from notes taken in pencil on excursions; studies of particular trees and flowers.

Music.— Two-part sight reading; songs read; a few rote songs; original songs notated; structure of major scale; minor and chromatic scale.

Gymnastics.— Training for increased dexterity and alertness; running, jumping, more active outdoor games. Apparatus: vaulting, climbing-rope, ladder-work, flying and traveling rings. Games: Dodge Ball, Captain Ball, Hornet's Nest, Touch Ball, relay races. Dancing.

Manual training.— Fall Quarter: Working-drawing, mechanical drawing, blue prints; concentrate on Christmas work.

Textiles.— Winter Quarter: Design and make costumes for dramatic work of year; Indian, English, and French colonial; designs stenciled for decoration of costumes on leather, cotton, linen.

Cooking.— Autumn Quarter: Study fermentation; can and pickle fruit; preserving by sugar, salt, spices, heat; fermentation in bread-making; yeast under microscope; products of fermentation, carbon dioxide and alcohol from molasses and yeast; change of alcohol into acetic acid in making vinegar; experiments with baking-powder.

Winter Quarter: Above work continued.

Metal-work.— Spring Quarter: Hammering of articles of social value, trays, bowls, candlesticks, etc., from sheet copper and brass; designs original; decoration applied to some during last term, in etching, pierced work or simple chasing.

Design.—Winter Quarter: Emphasis on invention; composition of plant and animal forms.

Modeling.—Spring Quarter: Pottery, using Greek processes and colors; figures on jars to be original illustrations of scenes from Greek life.

DIVISION E

SECTION 9 (NINTH SCHOOL YEAR)

At the age of eleven or twelve the child feels less interest in activities for their own sake; he tries to relate them to the world-activities about him. In studying different phases of the development of the United States, such as the development of the railroad, he constantly refers to the present, and tries to interpret the significance of the present in the light of the past. This is the keynote of the work in history: the study of some of the social and economic questions of the past, to be able to interpret present-day problems. Geography and the physical sciences are studied in the same way—as means to the understanding of what is going on around us. The children are not yet able to generalize broadly, but are able to organize their knowledge in the solution of a problem.

By the time the children reach this Section, they are expected to be able to read longer assignments intelligently, to use the indexes of books in selecting references, to write legibly and with ease, and to have such a grasp of mathematics as will enable the children to use it intelligently as a tool.

History.—The history of the United States from the Revolutionary War to the present time, especially the geographical, industrial, and social phases of the expansion of the American people; the great westward movement which began with the early emigration to Kentucky and continued across the continent to the Pacific Ocean.

Autumn Quarter: The chief topic of the quarter is "pioneer life." The child's conception of life on the frontier is built up from a study of such topics as the following: the migration of a family across the mountains to Kentucky; the cause of the migration; the possible routes across the mountains; the geographical factors involved in choosing a tract of land for a farm; the clearing and tilling of the land; and the necessity for some form of community life. Daniel Boone as a type of the early explorer and pioneer; the governmental problems presented to the pioneers and their solution; the settlement of Kentucky and Tennessee; the work of George Rogers Clark in the Revolution in the West; the settlement of the Northwest Territory; the Ordinance of 1787; the Ohio Company and other land companies in the settlement of Ohio. Reading of extracts from original sources. The writing of original stories of pioneer life, involving an accurate knowledge of frontier conditions. Required home reading, two of the following: Roosevelt, *The Winning of the West* (selected chapters); Thwaites, *Daniel Boone;* Churchill, *The Crossing* (first part); and Thwaites *How George Rogers Clark Won the Northwest.*

Winter Quarter: In this quarter the emphasis is transferred to the economic and industrial conditions in the West, and the territorial expansion; the demand for a market, and for the right to navigate the Mississippi; transportation, an important factor in the development of the West; the question of internal improvements; the Louisiana Purchase; the War of 1812, a war for commercial independence; the building of national and local roads; water transportation — steamboats, canals; the territorial expansion; the expedition of Lewis and Clark; Florida; the assimilation of Louisiana Territory; the growth of slavery questions; the Missouri Compromise; Texas; the war with Mexico; the Mexican cession. As in the Autumn Quarter, the class will write stories and records. Assignments of special reading will be given to individuals as well as to the class, and will be followed by oral and written reports. Phases of pioneer life will find expression in the work in clay-modeling. Required home reading, two of the following: Lighton, *Lewis and Clark;* Roosevelt, *Winning of the West* (selected chapters); Kinzie, *Wau Bun;* Brady, *The Conquest of the Southwest;* book reviews required.

Spring Quarter: The development of railroads; the effect of railroads and steamboats in the development of the trans-Mississippi country; the discovery of gold in California; the Oregon country; the events leading up to the Civil War; the economic conditions of the North and the South as affected by geographical factors; the Civil War; the great industrial revolution following the Civil War; the factory system; the industries of the North and the South. Excursions to several industrial plants, such as a steel plant, a farm, machinery works, railroad shops, etc.; a special study of the development of the textiles industry. Required home reading, two of the following: Parkman, *Oregon Trail;* Dana, *Two Years before the Mast;* Irving, *Astoria;* a biography of Lincoln; Hale, *The Man without a Country;* Taylor, *Eldorado.*

Geography.— Autumn Quarter: North America. Complete the study of North America begun in the eighth Section. Topography of the continent as a whole; the topographic divisions; climate of each; natural advantages of each, agricultural, mineral, commercial; state of development; the life of the people as affected by the geographic factors above mentioned; make a museum-exhibit of resources of United States; the relation of the geography of each division to the history; a study of present-day Canada and Mexico. A study of the principles underlying the climate of the United States (see "Science"); daily weather maps of United States Weather Bureau; making of maps from data furnished by the Weather Bureau. Blackboard chalk-modeling to show topography; physiographic processes studied on field trips and in geographic laboratory; maps; pictures; lantern slides.

Winter Quarter: South America. The general features of the continent as a whole and the geographic importance of each; the topographic divisions; the climate; application of principles of climate studied in the Autumn Quarter; winds and rainfall; the resources, agricultural and mineral; the commercial relations; the political divisions; the state of the people as a reflection of geographic conditions; museum exhibit to show economic relations of Chicago and South America; the large purpose — to get a conception of South America as a whole, topographic, climatic, industrial, commercial, social.

Spring Quarter: Eurasia. The same general plan as in the study of South America. The study of Eurasia will be continued in the eighth grade.

Nature-study.—Landscape: The class will make a series of weekly paintings showing the changes in the nature picture. The area selected for special study is the east side of Washington Park, north of Fifty-seventh street.

Autumn Quarter: Changes in vegetable growth as season ends; landscape coloring; the buds protected from effects of winter; healing of leaf scars; adaptations of different fruits for distribution; a study of the characteristics of our native trees (see "Manual Training"); drawing of characteristic forms of trees; excursion to Glen Ellyn.

Winter Quarter: Landscape drawings and paintings continued; characteristic forms of trees continued; the study of buds; the movement of sap in early spring and opening of buds.

Spring Quarter: Effect of varying temperatures upon growth; the forms of herbaceous vegetation as adaptations to conditions; color changes; the opening of buds; the opening of leaves; the structure and functions of leaves; excursions to Riverside, Willow Springs, and Dune Park.

Applied science.—Autumn Quarter: Hygienic physiology; digestion in relation to health; experiments; respiration; study of gases; proper breathing; circulation—the transference of nutrition and respiratory gases. Cooking; the preparation of foods; the application of heat; heat problems; experiments; generation of gases. Meteorology; constituents of atmosphere; effects of changes in temperature: winds, terrestrial and local; evaporation and precipitation of moisture; measurement of rainfall upon selected area; the amount recorded per acre for various crops; use of skiameter in measuring sunshine distribution.

Winter Quarter: General study of simple electrical problems; magnets and magnetism; making of simple apparatus; individual experiments working out qualitative results.

Spring Quarter: Food relations of plants; conditions of soil;

structure of plants studied in relation to getting food from the soil, the utilization of the carbon dioxide of the atmosphere, and the transference of food to the different plant tissues. Excursions to swamp regions, a flood plain (Riverside), hills and ravines (Willow Springs), and dunes (Dune Park); the plants of these places studied as to the food relations.

Mathematics.—The material for mathematics is selected, as far as possible, from the pupil's experience, and from problems arising in his school activities. In all cases enough practice is given to fix in the child's mind the mathematical principles and processes involved. Problems are selected in which the child feels the need for solution, or in which he sees a practical relation. Sufficient emphasis is given in terminology for a clear and intelligent use of it. The work may be divided, for the sake of outline, into (1) arithmetical processes, (2) geometrical constructions and applications, and (3) algebraic representations of arithmetical processes and equations.

Arithmetical processes: (1) Percentage and its applications to science, geography, history, and business and industrial questions; commercial discount, marking goods, buying and selling, taxes, insurance. (2) Interest and its applications; notes, bank discount, simple problems in compound interest. (3) Ratio and proportion as related to field- and shop-work. (4) Square root worked out through geometry and number, and methods reduced to formulated statements; applications to right triangle. (5) Paper-folding to work out geometrical methods for field-work. (6) Volumetric mensuration; boxes, bins, elevators, cylinders, cones.

Geometrical Constructions and Applications: (1) Working-drawings for manual training. (2) Representative drawings to scale of tracts of ground; of farms, maps, field measurements. (3) Designing for simple electrical and mechanical appliances. (4) The bisecting of a line, the construction of a perpendicular, the construction of angles and triangles, the bisecting of an angle. (5) Similar triangles; indirect measurements by the use of similar triangles; ratio and proportion through the laws of similar triangles (similar right triangles being used) English and metric systems of weights and measures used. (6) Topographic work begun with home-made apparatus. (7) Location of buildings.

Algebraic work: (1) Syncopated algebraic laws of number and of mensuration formulated into equations by abbreviating words into letters, the resulting equations being read as sentences. (2) The use of the equation in percentage and interest. (3) Use of equations in the study of force problems. (4) Equations in ratio and proportion problems. (5) Numerous problems solved by both arithmetic and algebra.

Autumn Quarter: Percentage and interest; geometrical constructions; drawings; generalized number.

Winter Quarter: Applications of percentage; geometrical constructions; equations.

Spring Quarter: Squares and square root; ratio and proportion; indirect measurements; geometrical constructions; equations; algebraic solutions by the equation.

Manual training.— Autumn and Spring Quarters: Method: working-drawings for each construction; a careful study of plans and principles involved. Articles: apparatus for use in experimental science; articles for use in home or school; the pupil is to be given a choice when practicable. A study of the history and distribution of some important cabinet woods; characteristics of bark, branching, and leaves by which the trees may be recognized; grain and finish of woods; lumbering.

Textiles.— Spring Quarter: A study of the development of the textiles industry; weaving on Swedish looms; fabric analysis; collection and classification of characteristic fabrics; evolution of the loom; biographies of inventors of textile machinery; excursions to shops and factories with a view toward understanding American textile products.

Metal-work.— Winter Quarter: This section has had one term of work in metal, and therefore is able to design more intelligently for this material. Design will be applied to all pieces that are executed either in etching, pierced work, or chasing. The new process of soldering and riveting may be undertaken by those who show ability to carry out their designs. Also very simple brooches and belt buckles are possible.

Cooking.—Autumn Quarter: A study of different foods; classification of foods; (1) carbohydrates (starches and sugars), (2) fats, (3) proteids (lean meats, certain parts of vegetables, white of egg); application of heat to each of these food-principles—temperatures at which each is cooked; ways of transmitting heat in cooking: radiation, conduction, convection; simple elementary food analysis; tests for proteids, starches, fats; isolation of food-principles of certain common foods, e. g., starch from potatoes, proteids from meat and wheat flour, fats from meats and nuts; generation of gases used in lightening doughs: (1) yeast, (2) an acid and an alkali, such as sour milk and soda, (3) baking-powder; expansion of these gases by heat.

Modeling.—Winter Quarter: The use of clay as a medium for the expression of types studied in history. This is done in the Winter Quarter to follow the study of pioneer life in the Autumn Quarter. The making of pottery in the latter part of the quarter.

Modern languages.—English: Autumn Quarter: The study of formal grammar as such is not emphasized in the Autumn Quarter, but the writing of frequent papers and reports, and the correction of indicated mistakes, require a knowledge of the simpler rules of grammar.

Winter and Spring Quarters: Sentence—subject, attribute, and copula; to realize these three parts in every sentence. Predicate—attribute and copula; appreciation of this in every predicate, whether consisting of the pure copula and the attribute, or of one word containing both ideas. Appreciation of the verb as expressing the unity of subject and attribute. Meaning of limit, define, modify; then appreciation of simple subject, simple predicate, complex subject, complex predicate. Parts of speech and their properties as they come in the work with the sentences.

French: Making of historical and literary cook-book for the fifth and sixth grades (material adapted from Alexander Dumas' *Le grand dictionnaire de cuisine*). The first potatoes in France; bread-making in France; Benjamin Franklin and Parmentier; Norman apples, table linen, knives, forks, spoons, plates, coffee, tea, etc. Making and illustrating of menus for French Canadian luncheon. Reading of French history made by the eighth grade.

Malot, *Sans famille;* Bruno, *Le tour de France par deux enfants,* Reading lessons and grammar work taken from *The Dramatic French Reader.*

German: The class will read Guerber's *Märchen und Erzählungen,* Vol. I. A few of the more difficult songs will be learned. Conversation, games, riddles, and poems, to be used to develop a feeling for German life. Grammar: the present, imperfect, perfect, and future of simple verbs; use of genitive and dative.

Oral reading.— The intensive study of the following from the standpoint of oral expression:

Autumn Quarter: Browning, "Herve Riel"; Tennyson, "The Revenge;" Riley, "The Full Harvest" and "Autumn;" Whittier, "The Huskers."

Winter Quarter: Interpretation of Shakespeare, *Julius Cæsar;* Whittier, several of *Songs of Labor.*

Spring Quarter: Lowell, "The Vision of Sir Launfal;" Riley, "The First Bluebird" and "Summer Day;" Whittier, several *Anti-Slavery Poems;* Burroughs, "The Bees." (For list of home reading-books, see "History.")

Writing and spelling.— The records and papers presented are criticised from the point of view of English, of spelling, and of penmanship. They are then corrected and filed.

Drawing and painting.— Drawing and painting are forms of expression used in many phases of school work, but especially in nature-study, geography, history, and literature. The class will make a series of weekly paintings as records of the changes in the nature picture. The drawings and paintings are filed as they are finished, and furnish a basis for criticism of the rate of improvement in observation and technique. (See "Design.")

Design.— Autumn and Winter Quarters: Design in this section is based upon the experience which has been gained previously in the crafts, and hence will not be so closely connected with those subjects, but will be more in the form of exercises. Review of entire subject of design with creative exercises in line, dark and light, and color, illustrating the principles of rhythm, balance, and harmony.

Music.— Two- and three-part sight-reading; triads; interval studies; rote songs; original songs.

Gymnastics.— This is a period of rapid
new functions and large amounts of new tis
the larger and freer movements. Exercises
ment of heart and lung action. Care ta
Marching: Requiring greater concentra
Apparatus: Vaulting and more finished wor
ing, jumping; form insisted upon. Games
ance and developing judgment; mount-ball,
basket-ball; games outdoors and indoors.
a week during the Winter and Spring Quart

DIVISION E

SECTION 10 (TENTH SCHOOL

History.— The European history imme
discovery of America will be presented acc
ing outline: I. The period of discovery and
raphy: (1) Geographical knowledge previ
century voyages; ideas of the Greeks and
Crusades; their effect upon the routes of tr
neys of the Polos; increase of geographica
breaking up of routes of trade. (4) The i
books of the Middle Ages; mural painting
upon knowledge. II. Feudalism and chiva
feudalism; the life of the people; the gr
III. The guild system of labor contrasted wit
system — Art: (1) The towns of the Mid
tion in line of trade; trade guilds. (2) Flo
— typical expressions of the thirteenth centu
Europe, illustrations of Gothic architecture.
guild system of labor; compare with modern

Literature.— Aldrich, "Friar Jerome
Book;" Longfellow, "The Sermon of St.
"Monte Cassino," "Giotto's Tower," "N
von der Wogelweid;" Arnold, "The Li
Francis" (selections); Henry Van Dyke, "
Tree;" Tennyson, "Gareth and Lynette," "

Lady of Shalott;" Lowell, "The Vision of Sir Launfal;" Scott, *Marmion and Douglas,* selections from *Ivanhoe, The Talisman,* and *The Monastery;* Shakespeare, *The Merchant of Venice* (interpretation by teacher). Home reading: Scott, *Ivanhoe, The Talisman;* C. M. Yonge, *The Little Duke;* Pyle, *The Story of King Arthur, Robert Hood, Men of Iron;* Lanier, *The Boy's King Arthur;* Gunsaulus, *Monk and Knight;* Pitman, *Stories of Old France;* Harding, *The City of the Seven Hills;* Brooks, *Historic Girls, Historic Boys.*

Geography.— As Eurasia is the scene of action in the history chosen for the year, it naturally becomes the center of the work in geography. This does not mean that the work will consist of a study of Eurasia only, but that the physiographic features of the globe will be studied with reference to this particular continent. Problems will arise whose solution requires some knowledge of physiographic processes. The autumn excursions will be the basis for this work. There will be, during the year, a general survey of the physical and climatic conditions of the globe, and an intensive study of Russia, Japan, England, Italy, France, and Germany. This selection is due to past or present historic interest.

Nature-study.— Autumn Quarter: I. The Garden. (1) The general oversight of the garden, with the specific work of mulching the beds, pruning the plants, and planting the cuttings of shrubs. (2) Insect depredations as shown on the garden plants; study of insect structure in relation to mode of life; special study of scales; use of compound microscope. II. Daily study of weather, using the government weather maps, with the color history of the season. III. Field work (throughout the year). Area affected by (1) running water, (2) waves, (3) wind. 1 (*a*) North Chicago — formation and growth of gully or ravine; (*b*) Thornton — a type of valley in later stage; a study especially of flood-plains and meandering stream; (*c*) tributary valley of the old outlet of Lake Chicago to Fraction Run; a rock ravine. (2) The south shore — eroding and building coasts. (3) Dune Park — sand dunes. These places will be visited in the order named. The pupils will study the development of the topography of the region, the distribution of the plant there, and the factors that control it. T maps (see "Mathematics"), on which the areas. They will study the borderland various vegetation areas, to emphasize th conditions — physical evolution and its infl

Winter Quarter: Meteorology con plant and animal life as shown in the gar

Spring Quarter: (1) The garden. This tion will (*a*) lay out the vegetable beds; the rose beds; (*c*) make a study of helpf killing the destructive insects, spraying, prune currant, blackberry, lilac, and other ology continued.

Home economics.— Beginning with th Ages, and instituting a comparison betw the present day, the class will make a stud The plan of the house and its furnishing; ventilating, and lighting; the water sup will be considered, and studied experime made to buildings in process of construct care of the individual home will lead to th keeping, and emphasis will be laid upon th household in helping to secure healthful the city, and in making the city beautiful.

Textiles.— Study of fabrics for cloth use; classification of fabrics; some prac chemical tests for the different textile fibers the preparation of embroidery materials; charts, and illustrative samples for the scho textile centers of the world, and regions of facture; history of the evolution of textil

Mathematics.— (1) Algebra viewed th means of the equation solve simple arit problems, laws of simple machines, and up to work with purely formal equation soning by the five laws of the equation.

ing: Scale plans and elevations of accessible objects; scale drawings of manual training; representative drawings of accessible and remote tracts of ground; topographic work from data taken in the field; construction of ornamental designs; study of government land surveys. (3) Geometry: constructive, experimental, and quasi-demonstrative; relations of angles of polygons, shown experimentally and by measurement; construction of square corners on paper and in the field; running parallels and laying out curves; staking out lines at any angles with given lines; proof of principles by actual superposition of representative figures; laws of similar triangles and their uses in field-work.

Languages.— Pupils who have previously studied French or German will continue that study. Any who are not studying a modern language may begin Latin. The syntax of these languages, by conscious comparison and contrast, will be used to aid in the understanding of English syntax. Latin in this grade will not take the place of the high-school Latin, but will form a basis for it, consisting of simple exercises planned in accordance with Professor Hale's *First-Year Latin* lessons. Pupils are expected, before completing the work of this grade, to have acquired the habit of spelling correctly, skill to write legibly, and power to express their thoughts clearly in both oral and written language. Systematic instruction in grammar to this end will be a part of the work in English.

French.— Planning and carrying out of a French Canadian party, to be given to French Canadian children of the parish of Notre Dame, Le Père Bergeron, Chicago: writing of brief sketches of French history for the seventh Section; dramatizing of scenes from *La Chanson de Roland* (Professor Cenri David will assist in this work). Christmas work: writing of scenes from the *Life of Sainte Geneviève;* illustrations of Puvis de Chavannes used; Panthéon. Short reading-lessons from the life of Charlemagne, *Les Troubadours, Richard Cœur de Lion, Bertrand de Born, Bertrand de Ventadour, Le Saint Grael.* Reading-lessons and grammar work taken from *The Dramatic French Reader.*

German.— Grammar; the declension of nouns and adjectives, and the conjugation of verbs. This class will read Guerber's

Märchen und Erzählungen, Vol. II. There
or twice each week, and the class will repro
told to them. The study of mediæval histor
some of the conversation. In addition,
dialogues, poems, and songs. In the Wint
be given.

Oral reading.— Subjects for oral readir
general work in nature-study, history, and
subjects listed under "Literature," and fr
dramatic selections to be used in the morni
reading of subject-matter bearing on these
to give the class information not otherwise
study of oratory has for its object the tr
speak with purpose and power to an audien

Music.— The work will include the st
and chromatic scales, with their intervals, a
common chords; the composition of melod
singing of unison songs; singing of part
melody in the bass, and, later part songs w

Drawing and painting.— Study of the
paintings in nature-study; drawings and pa
the Middle Ages; study of mediæval scri
illuminated manuscript.

Design.— Continuation of the subject
in the previous Section; study of historic

Modeling.— This will be used in conne
science. One quarter will be devoted to the

Gymnastics.— Training for co-ordinat
execution, dexterity, and pleasure in actic
exercises of skill on apparatus. Outdoors:
tance courses, running; endurance, long
slow and fast). Plays and games: add ant
practice of the higher organized, in simpl
recreation; "Running the Gauntlet."

Metal-work.— Hammer from sheet co
of social use, such as trays, bowls, candles
will design and execute his own article.

etching, pierced work, or chasing will be applied to some of these objects.

Woodworking.— Winter Quarter: The making of articles for use in the school. Spring Quarter: The making of articles for individual use, with emphasis upon staining, polishing, and care of wood. In drawing there will be (*a*) free-hand drawing for proportion and design; (*b*) reduction of these drawings to working-drawings; (*c*) blue prints.

EDITORIAL NOTI

The School Grade a Fiction

The school grade as now generally
fiction in philosophy, but a stubborn and
practice. The grouping and
should be based upon the nat
should be a flexible adjustm
each other and to the thing to be done. Th
or ignores most of the principles that cont
people in practical affairs. Under its ope
teacher to lay the greater emphasis upon
pupils, and to ignore differences. It pl
uniformity, and therefore it tends to subst
individual as the unit of instruction.
school grade approaches its ideal, the m
pupil work for himself; while the closer
grouping required by the newer social ide
must the individual strive for the whole.

Evils of Uniformity

The school grade aims at a certain de
in three things, namely, *age, knowledge,*
limits are a school year vary
to ten months. These rigid c
the stamp of their own arbitr
tion of subject-matter and methods of
render it impossible to realize the highest id
life in the school. The grading system
before child-study opened the eyes of teac
the *quantity* idea in education as opposed t

Influence of Older Pupils

In school, not all of the teaching is do
younger children are constantly learning f
work were properly planned,
age than that now permitted
distinct advantage. Younge
skill and knowledge, and the older woul

sideration for others and in responsibility that usually remain forever untaught. In the molding of character the efficiency of the school would be greatly increased.

Uniformity in Knowledge Unnecessary

It is equally undesirable to grade pupils on the basis of equality of knowledge. Outside of school such an aggregation of people would be considered rather stupid company, with but little chance for improvement. It would distinctly improve the situation to bring together in some common enterprise pupils who differ widely in both knowledge and experience. This applies especially where the pupils are employed in doing rather than in talking. The less capable learn from those who know more, and the latter will learn to work from the strongest stimulus that can move anyone — the necessity of making knowledge immediately intelligible and available for others. The nearer the conventional grade is approximated, the less there is of such a motive; for a similarity of knowledge makes each one useless and uninteresting to every other.

Uniformity in Skill Unnecessary

The same argument applies against the requirements for a parity of skill. Every pupil has a certain skill of his own, and his work should so relate him to others that he may make the most of it. He need not be "graded" with those having equal skill in the same direction. This point finds illustration in the building of a house.

Standing beside a mortar bed one morning, Sam suddenly looked up from his work and said: "Look heah, boss, do you recognize de fac' dat dis yer 'stablishment 'pends on me dis mawnin'?" "How is that?" I asked. "Well, y' see, if I'm not onto my job in mixin' dis mawtah, you's goin' to git a rotten wall; an' if de wall's no good, you needn't go no furdah; no use to put in youah woodwork, no use to put on de paint or youah papah. I tell you, boss, 't all 'pends on me. Leastwise, dat's de way I flosofize about it." Sam was right; that morning the responsibility for the house rested less upon the shoulders of the college-bred and well-paid architect than it did upon the skill and fidelity of that uneducated and underpaid negro. At times there were six or eight different kinds of workmen had quite the same skill, in no two was it r what was needed and what he was best a was so organized that the house-building well; but the organization bore no reseml aggregation known as a "grade."

Gradation and Subject-Matter

The effect of the present grading syst of subject-matter has been pernicious. attempts at cross-sectioning certain portions may be tri pigeon-holes of the grades. thousands of text-books, and there is scar not been marred by the ill-advised analy suffered comparatively little, partly becau the schools, teachers were beginning to t partly because of the utter repugnance o pupils.

Gradation Hinders the Teacher

The evils of arbitrary grading are nc effects upon the teacher. "There is no gr ing," Colonel Parker thunde however, the words have hac notion that each grade must persistent at the two extremes — the kind school. Those entering a course of trainin are loath to trouble themselves with wha would-be high-school teacher is apt to re he look into the nature of elementary ins upon his intelligence. The teacher who is new ideas is the one who believes that t which he may be fitted to teach a particular of others. Of such teachers let all schoo

Gradation and Morals

The influence of the grading system u sarily bad. It retards his progress through and it fosters selfishness. In all the pupils are working f they are spurred to their grea leading to bitter rivalries is the inevitable

In the wake of the grade, trail many evils that fret the children. Not the least of these are the marking system and formal examinations, which have done more to introduce and foster knavery during the impressionable years of childhood than all other agencies combined. Under such unphilosophic and arbitrary stimuli to action, it matters not how hard he may try, no pupil can grow up honest or unselfish.

A Trail of Evil

Grouping of pupils under the ideals of the new education rests upon a principle radically different from that which now prevails. Under the old ideals, *the children must exert themselves to excel each other.* Under the new, *members of a group must exert themselves to help each other.* This change is wrought through a more intelligent organization of their work. In the former, the work is so planned that each must strive for the same thing — the very same bone; in the latter that — as in the building of the house — the best effort of each is a needed contribution to the welfare of all. Each, therefore, *must* encourage and support the other. It is the operation of this principle that at once divides the light from darkness, that lifts civilization out of barbarism, that filters righteousness from iniquity, and that will finally give us the ideal school.

The True Principle

The problem of grading and grouping of pupils will be solved *when the children are permitted to plan work for themselves that demands co-operation.* It must be for an end that no one by himself can attain, that, in school as well as out, the principle may be established that no one can live unto himself alone. That is the supreme fact in democracy.

Group for Co-operation

It is with sorrow that we note in the issue of the *Intelligence* bearing date of May 15 the words of an official farewell by its editor, Mr. E. O. Vaile. "Failing health and the heavy pressure incident to the strenuous life of an editor and publisher" are given as the cause. Above and beyond the feelings prompted by

personal friendship for Mr. Vaile, it
regret to thousands of teachers that he
editorial field. No educational paper
stronger personality behind its editorial
the *Intelligence* one always expected to
of a personal opinion, though it was
harshly, expressed. In this respect, ho
stood out in refreshing contrast with
brethren that are rather wearisome with
ing personals.

One can understand why Mr. Vaile
having the personality of his paper me
of a great company. In this regret
heartily join. But the personality and
not thus disappear. The children of th
generally owe him a heaping measure
for what he has done for them in his
spelling. To Mr. Vaile perhaps more
due that teachers are really beginning to
ously. Through his efforts, with but
"scholars" of the country, the matter
before the National Educational Associ
reform movement may be said to be fair
has made Mr. Vaile's life well worth the

We sincerely hope that rest may rest
of health, and that he may yet be spare
panionship of his many friends.

INDEX TO VOLUME V.

INDEX TO ARTICLES

PAGE

A Discussion of Mr. Fenollosa's Theory of Art Development and its Relation to Certain Problems of Elementary Education, Lillian S. Cushman.... 473
A Morning Exercise, Pearl I. Backus.......... 267
A Plan for a Vacation School in Connection with the School of Education, Mrs. Caroline M. Hill.......... 428
A Study in Theories of Art, S. B. Allison.......... 385
Abbotsholme, The School at, I, II, Patrick Geddes.......... 321, 396
American History in the Elementary Schools: A New Standpoint for the Selection of Subject-Matter, Emily J. Rice.......... 449
An Ideal Course of Study, William M. Giffin.......... 271
Announcement for January.......... 250
Annual Report of the Home Committee of the Parents' Association of the School of Education of the University of Chicago, Mrs. Charles F. Harding.......... 65
Arithmetic? What is Accuracy in Elementary, G. W. Myers.......... 292
Art, A Study in Theories of, S. B. Allison.......... 385
Art, Charles Zueblin.......... 85
Art in the University Elementary School, Lillian S. Cushman.......... 603
Art, The Application of, to Hand-work, Ralph Radcliffe Whitehead.......... 92
Art, Theory of Development: A Discussion, of Mr. Fenollosa's Theory, Lillian S. Cushman.......... 473
Arts, The Fine, Ernest F. Fenollosa.......... 15
Avenues of Language-Expression in the Elementary School, Della J. Long.. 225

Bedales School, Petersfield, England, J. H. Badley.......... 257
Beet Sugar, The Making of: A Morning Exercise, Henry T. Mortensen.... 364
Beverly Hills, Elsabeth Port.......... 275
Birds, Nature-Studies With, I, II, Robert W. Hegner.......... 408, 462
Book Reviews.......... 63
Bookbinding, Irene Warren and Anna B. Stiles.......... 607

Children, The Social Life of, Mrs. Porter Lander MacClintock.......... 232
Christmas at the University Elementary School, Mrs. Frank Hugh Montgomery.......... 334
Christmas Song, Weihnachtslied, Richard Strauss.......... 185
Clay-Modeling, Antoinette B. Hollister.......... 604
Common-Sense Interpretations of Shakspere, Edwin W. Chubb.......... 420
Constructive Work (Editorial), Wilbur S. Jackman.......... 59
Cooking, Alice P. Norton.......... 608
Cooking in the Third Grade, Jenny H. Snow.......... 504
Correlation and Technical Sequence, Elizabeth Euphrosyne Langley........ 169

Course of Study, An Ideal, William M. Giffin....
Curriculum, Is the Elementary-School, Adjusted?
    lain ....
Curriculum of the University Elementary School..
Curriculum, The ....

Dedication of the School of Education, Mrs. Emmo
Dedication of the School of Education, Nicholas M.
Dedication of the School of Education (Editorial),
Description of the Playhouse Made by First-Grade C
    Parker School, Rose Phillips and Grace De
Drawing and Painting, Annette Covington.........

Editorial Notes, Wilbur S. Jackman..57, 122, 187, 2
Editorial Notes, Bertha Payne...................
Education as Creation Wilbur S. Jackman.........
Educational Factor, The Library as an, M. E. Aher
Elementary and Secondary Education, Has the Di
    at the Proper Point? W. C. Ruediger.......
Elementary Manual Training, Technique in, Harvey
Elementary School, American History in the, Emily
Elementary School, Hand-Work in the, Ida Hood
Elementary School, Nature-Studies with Birds for t
Elementary School, Notes on the Work of the Unive
Elementary School, The University: Its General Pl
    Wilbur S. Jackman.......................
England, The Bedales School, Petersfield, J. H. Bad
English, Wilbur S. Jackman......................
Excursions in the University Elementary School,
Extracts from the Last Report of the Superintendent
    Schools, Mrs. I. S. Blackwelder...........

Fall Planting, Wilbur S. Jackman.................
Field Work in the University Elementary School,
Francis W. Parker School, Science in The, Willard
Fraternities, Wilbur S. Jackman.................
French, Lorley Ada Ashléman.....................

Garden Work in the Fifth Grade of the Univer
    Mary M. Steagall.........................
Genetic Psychology the Basis of a New Education,
Geography, Science, and Mathematics, Thomas M.
Geography, Wilbur S. Jackman....................
German, Anna Scherz...........................

Hand-Work in the Elementary School, Ida Hood
Hand-Work, The Application of Art to, Ralph R
Has the Dividing Line Between Elementary and Se
    Drawn at the Proper Point? W. C. Ruedig
Hills, Beverly, Elsabeth Port....................
History, Emily J. Rice..........................

PAGE
History, American, in the Elementary Schools, Emily J. Rice.............. 449
History in the First Grade, Elsie A. Wygant.............................. 524
History in the Second Grade, Elsabeth Port.............................. 528
History in the Third Grade, Gudrun Thorne-Thomsen.................... 531
History in the Fourth Grade, Gertrude Van Hoesen........................ 536
History in the Fifth Grade, Carrie M. Pierce.............................. 540
History in the Sixth Grade, Annas Higgins.............................. 544
History in the Seventh Grade, Harry O. Gillet........................... 547
History in the Eighth Grade, Katharine M. Stilwell........................ 552
History in the University Elementary School, Emily J. Rice.............. 521
Home Committee, Annual Report of the, Mrs. Charles F. Harding......... 65

Indian School, Work in the Carlisle, Anna H. Stewart..................... 571
Is the Elementary-School Curriculum Adjusted? Arthur Henry Chamberlain 302

Language-Expression in the Elementary School, Avenues of, Della J. Long.. 225
Language in the Elementary School, The Teaching of a, Lorley A. Ashléman 285
La Salle et Joliet au Château St. Louis, Lorley A. Ashléman.............. 493
Library as an Educational Factor, The, M. E. Ahern........................ 278
Linen, Textile Work in, Edward F. Worst.............................. 360
Lionel of Orkney — A One-Act Play, Jennie Hall........................... 29
Literary Notes.. 583

Manual Training and Manual Labor, Willard C. Gore........................ 77
Manual Training in Primary Grades, Annette Butler........................ 82
Manual Training, Technique in Elementary, Harvey G. Hatch............ 159
Manual Training, The Place of Technique in Elementary, Frank M. Leavitt.. 72
March of the Little Sandals (Music), May Root Kern..................... 55
Mathematics, George W. Myers.. 609
Mathematics, Science, and Geography, Thomas M. Balliet................. 142
Memorial Fund, The Colonel Francis W. Parker............................ 574
Metal-Working, Gertrude Van Hoesen.................................... 606
Morning Exercise, A, Pearl I. Backus.................................... 267
Morning Exercise, A: The Making of Beet Sugar, Henry T. Mortensen.... 364
Music, Mrs. May Root Kern... 601
Music: Pebble Game; Forming the Circle; A Riddle, Mrs. Crosby Adams 118
Music: Weihnachtslied (Christmas Song), Richard Strauss.............. 185
Nature-Studies with Birds for the Elementary School, I, II............408, 462

Nature-Study and Applied Science, Wilbur S. Jackman.................. 610
New Education, Genetic Psychology, the Basis of A, Mrs. Carrie R. Squire.. 349
Notes on the Work of the University Elementary School, Wilbur S. Jackman 193

October, Parents' Association, Report, Mrs. Frank Hugh Montgomery...... 180
Organizations, Parents' and Teachers', Helen M. Hefferan.............. 241

Parents' and Teachers' Organizations, Helen M. Hefferan................ 241
Parents' Association, Annual Report, Mrs. Charles F. Harding............ 65
Parents' Association, March Meeting, Mrs. Frank Hugh Montgomery...... 508
Parents' Association: Report of October Meeting, Mrs. Frank Hugh Montgomery 180
Parents' Association, The Meeting for December, Mrs. Frank Hugh Montgomery 244

Parents' Association, Wilbur S. Jackman.........
Parents' Association, Work of the Home Committee
Jackman ....
Parents' Associations, Notes from, Mrs. Helen M.
Petersfield, England, The Bedales School, J. H. Ba
Plan and Course of Study in the University Elemen
Jackman ....
Planting, Fall, Wilbur S. Jackman................
Play, One-Act, Lionel of Orkney..................
Playhouse Made in Francis W. Parker School, Rose P
Practice Work in the University Elementary School
Psychology, The Value of, for Teachers, M. V. O'S
Reddie, Dr. Cecil, The School at Abbotsholme, I, Pa
Robert, Cavalier de La Salle, et Joliet au Château
Ashléman ....
Sandals, March of the Little (Music), May Root Ker
Seed and Soil, Agnes W. O'Brien................
Science, Geography, and Mathematics, Thomas M.
Science in the Francis W. Parker School, Willard S.
School Grade a Fiction, The, Wilbur S. Jackman (E
School Songs, The Selection of, Edwin L. Norton..
School Year, Outlines of Work for Each...........
Shakspere, Common-Sense Interpretations of, Edwin
Social Life of Children, The, Mrs. Porter Lander M
Songs, The Selection of School, Edwin L. Norton...
Speech, Oral Reading and Dramatic Art, Martha J. F
Study, An Ideal Course of, William M. Giffin......
Summer Schools for Teachers (Editorial), Bertha P
Teachers' Organizations, Parents' and, Helen M. Hef
Teaching and Study, Dr. Theodore B. Noss.........
Technical Sequence, Correlation and, Elizabeth Euph
Technique in Elementary Manual Training, Harvey C
Technique in Elementary Manual Training, The Plac
Textile Work in Linen, Edward F. Worst.........
Textiles, Clara Isabel Mitchell...................
The Application of Art to Hand-work, Ralph Radcliff
The Colonel Francis W. Parker Memorial Fund...
The Curriculum of the University Elementary Sch
The Elementary School Teacher.................
The Extension of the Vacation-School Idea, Mrs. Ca
The Fine Arts, Ernest F. Fenollosa...............
The Library as an Educational Factor, M. E. Ahern
The Making of Beet Sugar — A Morning Exercise,
The March Meeting of the Parents' Association, M
gomery ....
The Meeting of the Parents' Association, Mrs. Fran
The Parents' Association, Mrs. Frank Hugh Montgo

PAGE
The Parents' Association: Report of the October Meeting, Mrs. Frank Hugh Montgomery 180
The Place of Technique in Elementary Manual Training, Frank M. Leavitt.. 72
The School at Abbotsholme, Conducted by Dr. Cecil Reddie, I, II, Patrick Geddes 321, 396
The Selection of School Songs, Edwin L. Norton.......... 148
The Social Life of Children, Mrs. Porter Lander MacClintock.......... 232
The Teaching of a Language in the Elementary School, Lorley A. Ashléman 285
The Value of Psychology for Teachers, M. V. O'Shea.......... 129
Third Grade, Cooking in the, Jennie H. Snow.......... 504
University Elementary School, Christmas at the, Mrs. Frank Hugh Montgomery 334
University Elementary School, Notes on the, Wilbur S. Jackman.......... 193
University Elementary School, The Curriculum of.......... 202
Vacation School Idea, The Extension of the, Mrs. Caroline M. Hill.......... 298
Vacation School, Plan for a, in Connection With the School of Education, Mrs. Caroline M. Hill.......... 428
Vacation Schools, Extracts From the Last Report of the Superintendent of the Chicago, Mrs. I. S. Blackwelder.......... 432
Weihnachtslied (Christmas Song), Richard Strauss.......... 185
What is Accuracy in Elementary Arithmetic? G. W. Myers.......... 292
Woodworking, Annette Butler.......... 606
Work in the Carlisle Indian School, Anne H. Stewart.......... 571
Work of the Home Committee of the Parents' Association, Mrs. Wilbur S. Jackman 249
Work with Minerals for Little Children, Elsie A. Wygant.......... 36

INDEX TO AUTHO

Adams, Mrs. Crosby, Pebble Game, Forming the C
Ahern, M. E., The Library as an Educational Facto
Allen, Anne E., Outline of Work for the School Ye
1 and 2.................................
Allison, S. B., A Study in Theories of Art........
Ashléman, Lorley Ada, French..................
The Teaching of a Language in the Elementary
Robert, Cavalier de La Salle, et Joliet au Château S
Backus, Pearl I., A Morning Exercise..........
Badley, J. H., Bedales School, Petersfield, England..
Balliet, Thomas M., Science, Geography, and Mat
Bass, Willard S., Science in The Francis W. Parke
Blackwelder, Mrs. I. S., Extracts From the Last
intendent of the Chicago Vacation Schools..
Blaine, Mrs. Emmons, Dedication of the School of
Butler, Annette, Manual Training in Primary Gra
Woodworking ....
Butler, Nicholas Murray, Dedication of the School
Chamberlain, Arthur Henry, Is Elementary School
Chubb, Edwin W., Common-Sense Interpretations
Clark, Ida Hood, Hand-work in the Elementary Sch
Covington, Annette, Drawing and Painting.......
Cushman, Lillian S., A Discussion of Mr. Fen
Development and Its Relation to Certain P
Education ....
Art ....
Dewey, Grace, Playhouse Made in the Francis W.
Fenollosa, Ernest F., The Fine Arts............
Fleming, Martha J., Speech, Oral Reading, and Dr
Geddes, Patrick, The School at Abbotsholme, Co
Reddie, I................................
The School at Abbotsholme, Conducted by Dr. Ceci
Giffin, William M., An Ideal Course of Study.....
Gillet, Harry O., History in the Seventh Grade....
Outline of Work for the School Year, Division E,
Gore, Willard C., Manual Training and Manual Lab
Hall, Jennie, Lionel of Orkney: A One-Act Play..
Harding, Mrs. Charles F., Annual Report of Paren
Hatch, Harvey G., Technique in Elementary Manual

PAGE

Hefferan, Mrs. Helen Maley, Notes From Parents' Associations........ 372
Parents' and Teachers' Organizations........ 241
Hegner, Robert W., Nature-Studies with Birds for the Elementary School, I 408
Nature-Studies With Birds for the Elementary School, II........ 462
Higgins, Annas, History in the Sixth Grade........ 544
Outline of Work for School Year, Division D, Section 8........ 646
Hill, Mrs. Caroline M., A Plan for a Vacation School in Connection With the School of Education........ 428
The Extension of the Vacation-School Idea........ 298
Hollister, Antoinette B., Clay-Modeling........ 604
The Parents' Association........ 313

Jackman, Mrs. Wilbur S., Work of the Home Committee of the Parents' Association........ 249
Jackman, Wilbur S., Editorials: Constructive Work........ 59
Dedication of the School of Education........ 59
Education and Creative Work........ 511
Elementary School Teacher, The........ 57
Fraternities and Their Influence........ 576
Home Work for Children........ 376
Mourners, The........ 187
School Grades and Their Evils........ 666
Shortening the Curriculum........ 251
Teachers' Federation and Labor Unionism........ 439
Technique and its Relation to Thinking........ 313
Unused Energy of Boys and Girls........ 122
English........ 597
Fall Planting........ 114
Geography........ 610
Nature-Study and Applied Science........ 610
Notes on the Work of the University Elementary School........ 193
The University Elementary School: Its General Plan and Course of Study 585
Young Folks Library (Book Review)........ 382

Kern, Mrs. May Root, March of the Little Sandals (Music)........ 55
Music........ 601
Kester, Abram A., Outline of Work for the School Year, Division E, Section 9 (K)........ 652
Kroh, Carl J., Physical Training........ 601

Langley, Elizabeth Euphrosyne, Correlation and Technical Sequence.... 169
Leavitt, Frank M., The Place of Technique in Elementary Manual Training 72
Long, Della J., Avenues of Language Expression in the Elementary School 225

MacClintock, Mrs. Porter Lander, The Social Life of Children........ 232
Mitchell, Clara Isabel, Textiles........ 605
Montgomery, Mrs. Frank Hugh, Christmas at the University Elementary School........ 334
Report of Parents' Association for October........ 180
The March Meeting of the Parents' Association........ 508
The Parents' Association........ 311

PAGE
MORTENSEN, HENRY T., The Making of Beet Sugar — A Morning Exercise 364
MYERS, GEORGE W., Mathematics 609
  What is Accuracy in Elementary Arithmetic? 292

NORTON, ALICE P., Cooking 608
NORTON, EDWIN L., The Selection of School Songs 148
NOSS, DR. THEODORE B., Teaching and Study 563

O'BRIEN, AGNES W., Seed and Soil 556
O'SHEA, M. V., The Value of Psychology for Teachers 129

PAYNE, BERTHA, Educational Experiments (Editorial) 316
PHILLIPS, ROSE, Playhouse Made in the Francis W. Parker School 174
PIERCE, CAROLINE M. History in the Fifth Grade 540
  Outline of Work for the School Year, Division D, Section 7 639
PORT, ELSABETH, Beverly Hills 275
  History in the Second Grade 528
  Outline of Work for the School Year, Division B, Section 3 616

RICE, EMILY J. American History in the Elementary Schools: A New Standpoint for the Selection of Subject-Matter 449
  History 611
  History in the University Elementary School 521
RUEDIGER, W. C. ,Has the Dividing Line Between Elementary and Secondary Education Been Drawn at the Proper Point? 482

SCHERZ, ANNA, German 600
SNOW, JENNY H., Cooking in the Third Grade 504
SQUIRE, MRS. CARRIE R., Genetic Psychology the Basis of a New Education 349
STEAGALL, MARY M., Garden Work in the Fifth Grade in the University Elementary School 50
STEWART, ANNE H., Work in the Carlisle Indian School 571
STILES, ANNA B., Bookbinding 607
STILWELL, KATHARINE M., History in the Eighth Grade 552
  Outline of Work for the School Year, Division E, Section 10 660
STRAUSS, RICHARD, Weihnachtslied (Christmas Song) 185

THOMSEN, GUDRUN THORNE-, History in the Third Grade 531
  Outline of Work for the School Year, Division C, Section 5 626

VAN HOESEN, GERTRUDE, History in the Fourth Grade 536
  Metalworking 606
  Outline of Work for the School Year, Division C, Section 6 633

WARREN, IRENE, Bookbinding 607
WHITEHEAD, RALPH RADCLIFFE, The Application of Art to Hand-work 92
WORST, EDWARD F., Textile Work in Linen 360
WYGANT, ELSIE A., History in the First Grade 524
  Outline of Work for the School Year, Division B, Section 4 621
  Work With Minerals for Little Children 36

ZUEBLIN, CHARLES, Art 85

INDEX TO BOOK REVIEWS.

(Only signed reviews are noted.)

PAGE
A River Journey, *Parker and Helm*, W. W. Atwood........................ 384

Educational Music Course, *McLaughlin*, M. R. Kern...................... 63
Elementary Algebra, *Tanner*, Geo. W. Myers........................... 519
Elementary Woodworking, *Foster*, Annette Butler....................... 447
Elements of Algebra for Beginners, *Hull*, William M. Giffin................. 63

Running the River, *Eggleston*, Harry O. Gillet.......................... 518

Speech on Conciliation with America, *Burke*, William MacDonald.......... 128

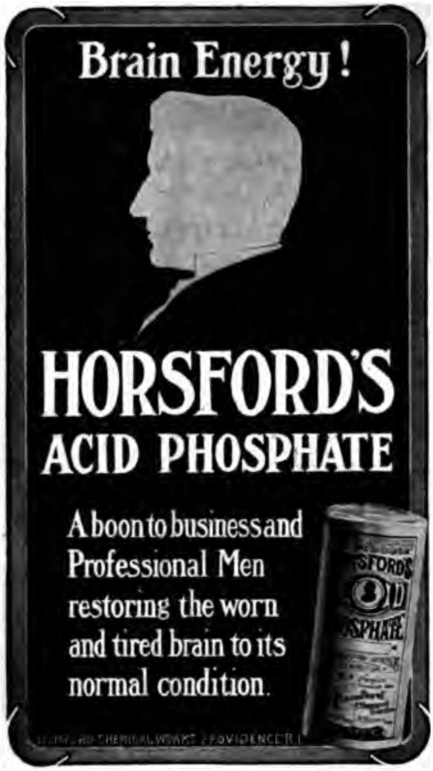
The Appleton Arithmetic, *Young*, E. C. Lavers.......................... 191
The Culture Readers, *Warner*, Elsie A. Wygant......................... 320
The Ship of State, William M. Giffin.................................. 192

Young Folks' Library, Wilbur S. Jackman.............................. 382

INDEX TO BOOKS RECEIVED.

PAGE

- American Book Co.:
  - Baldwin's Spelling by Grades 64
  - Burke's Speech on the Conciliation of America 128
  - Dickens's Christmas Stories 128
  - Dumas' Les trois Mousquetaires 64
  - Elementary Algebra, *Tanner* 128
  - Gateway Series of English Texts 128
  - Larra's Partir à Tiempo 320
  - New Century History of the United States, *Eggleston* 447
  - Overton and Hill's Nature Study 584
  - Silas Marner 128
  - Spencer's Practical Writing 584
  - Steps in English 127
- A. S. Barnes & Co.:
  - The Battles of the American Revolution, *Carrington* 583
  - The House in the Woods, *Henry* 583
  - The Mother's Manual, *Coolidge* 583
- Ginn & Co.:
  - An Elementary American History, *Montgomery* 518
  - Elementary German for Sight Translation, *Ford* 64
  - Our Bodies and How We Live 127
  - Schucking's Die Drei Freier 64
  - Smiles's Self-Help 127
  - The Louisiana Purchase, *Hitchcock* 517
- D. C. Heath & Co.:
  - The Frozen North, *Horton* 383
  - The Western United States, *Fairbanks* 383
- Hinds & Noble, N. Y.:
  - Howe's Handbook of Parliamentary Usage 128
- E. L. Kellogg & Co.:
  - Practical and Artistic Basketry, *Tinsley* 583
- Milton Bradley Co.:
  - Handbook for Kindergarten and Primary Schools, *Hoxie* 583
- The Macmillan Co.:
  - Pioneer History Stories, *McMurry* 517
  - Whistler as I Knew Him, *Mempes* 583
- Whitaker & Ray Co.:
  - An Aid in the Study and Teaching of Lady of the Lake, Evangeline, Merchant of Venice, *Graham* 448
- An Aid in the Study and Teaching of Snowbound, The Vision of Sir Launfal with Complete Text of the Latter, *Graham* 448
  - Civil Government Simplified, *Duvall* 448
  - Grammar by the Inductive Method, *Doub* 448
  - Topical Discussion of Geography, *Doub* 448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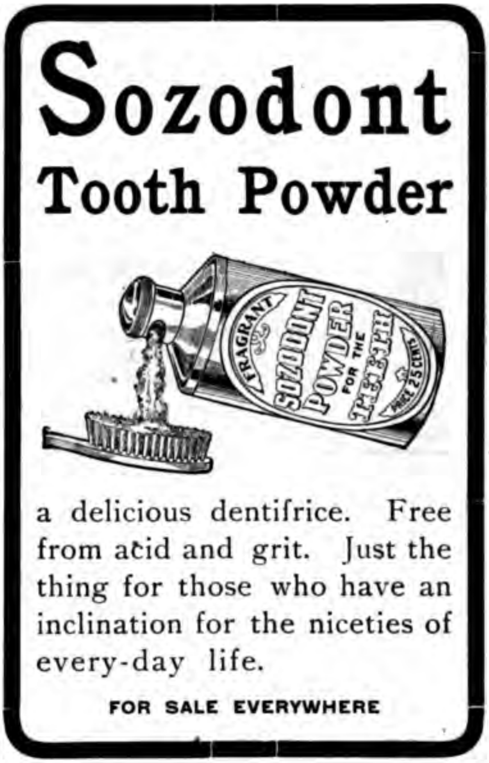
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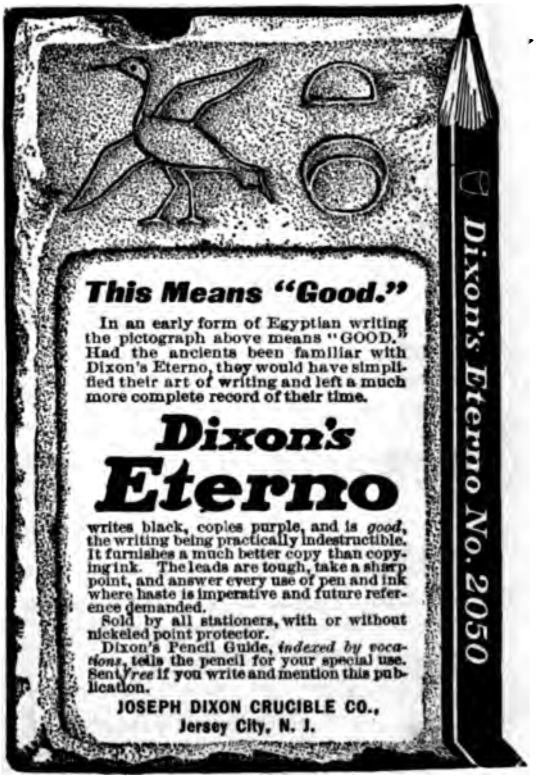

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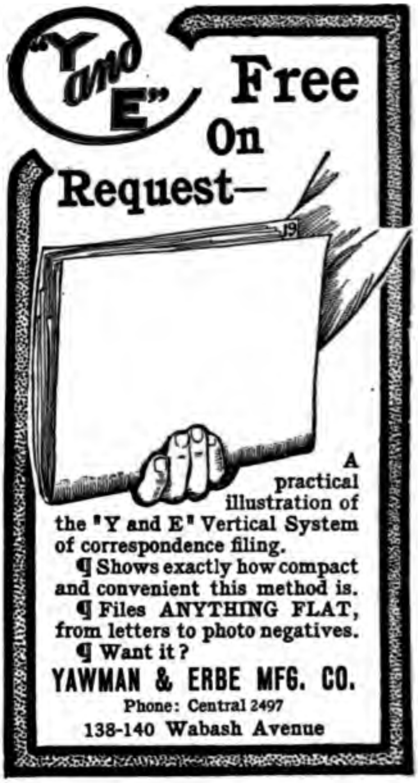

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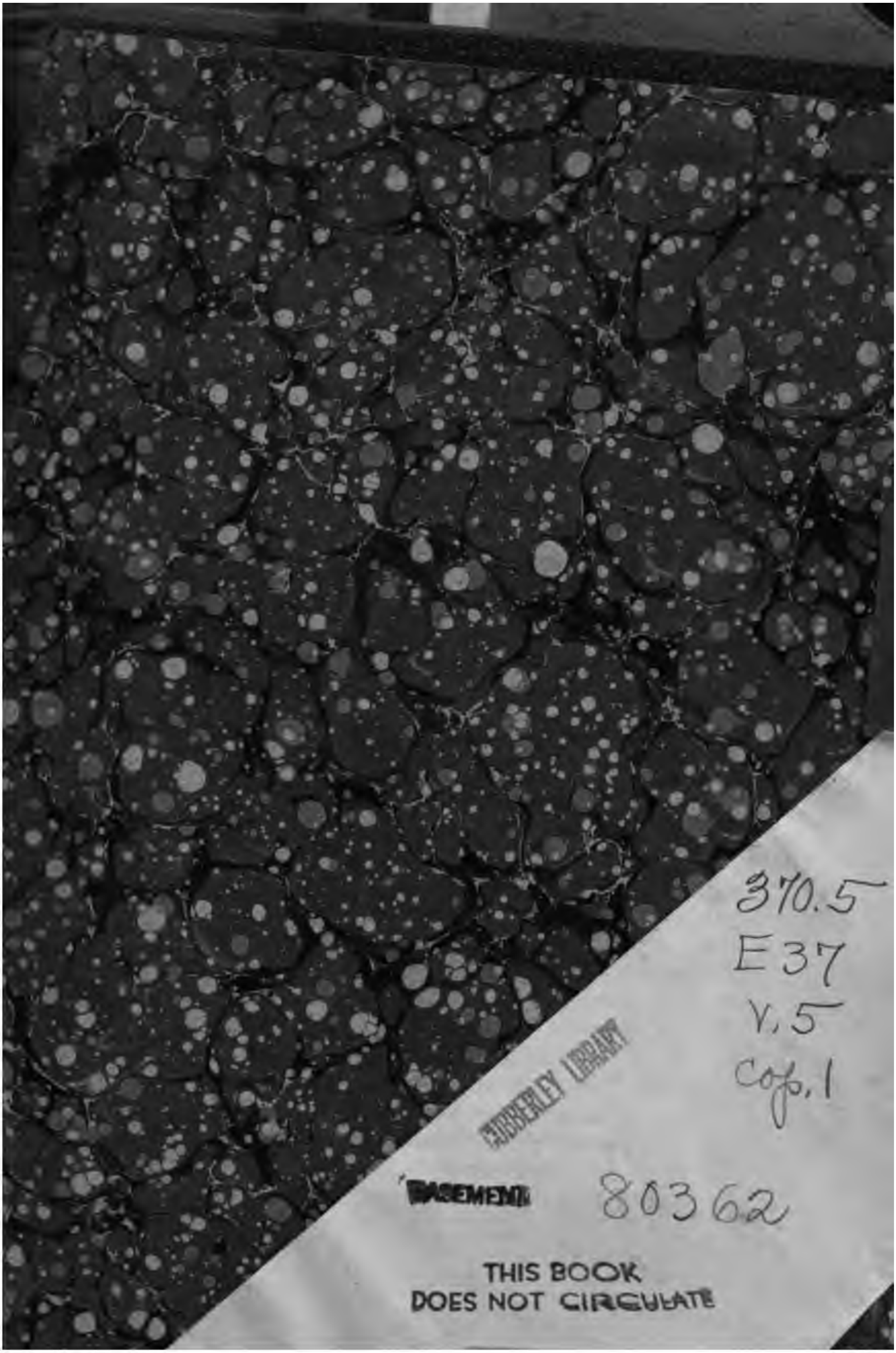

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